

Online Appendix

Not Playing Favorites: Parents and the Value of Equal Opportunity

Jim Berry, Rebecca Dizon-Ross, and Maulik Jagnani

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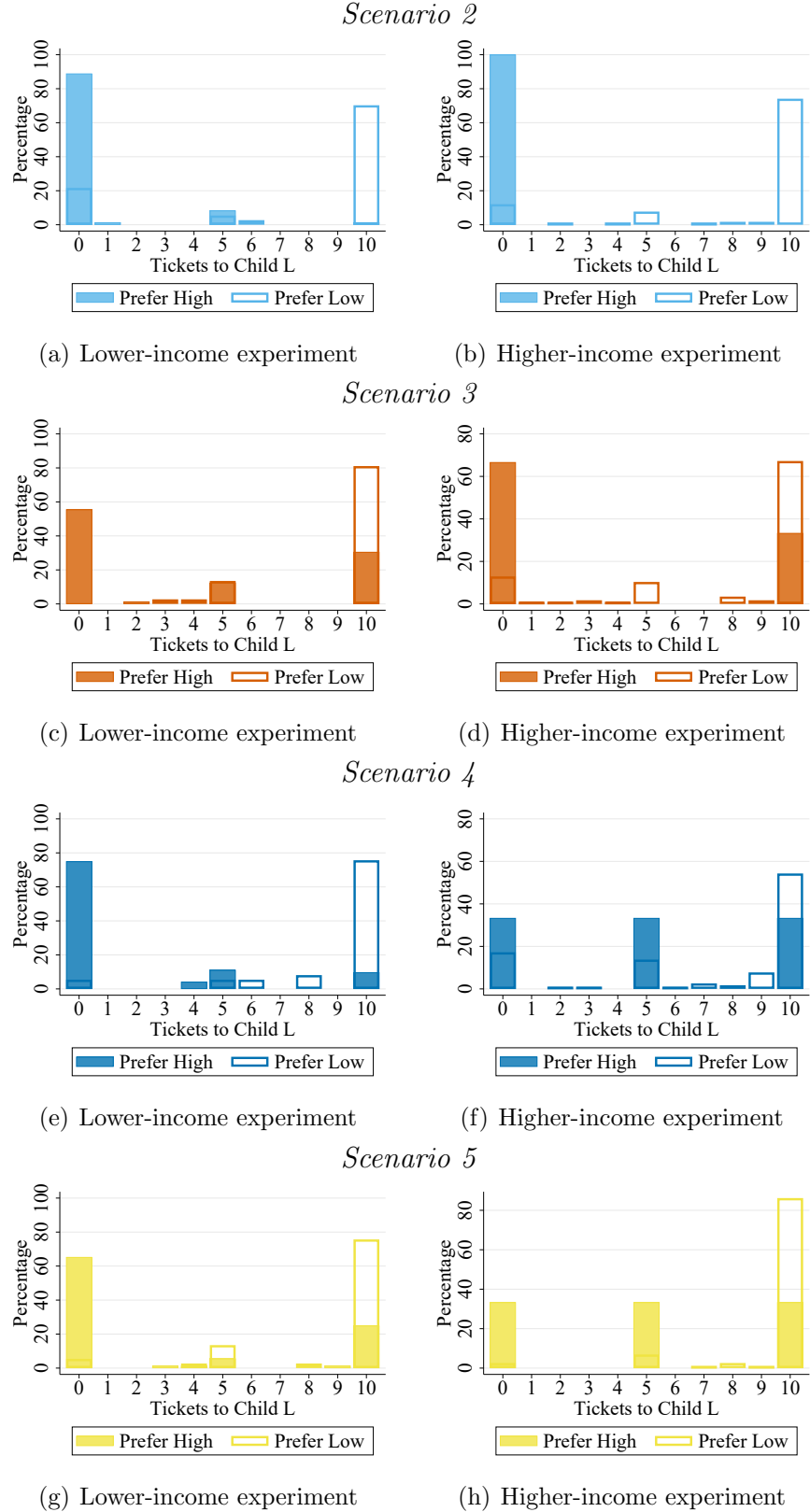
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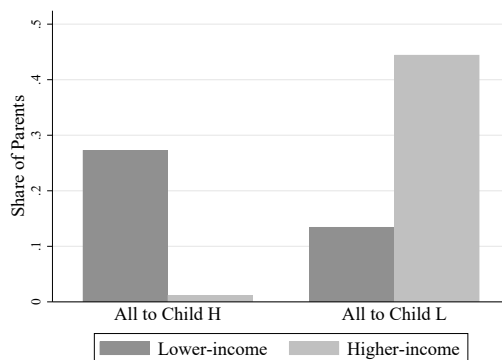
A Online Appendix Tables and Figures

Online Appendix Figure A.1: Consistent with Child-Specific Preferences, Parents Who Give More Tickets to Child H (L) in Scenario 1 Continue to Allocate More to Child H (L) in Scenarios 2-5



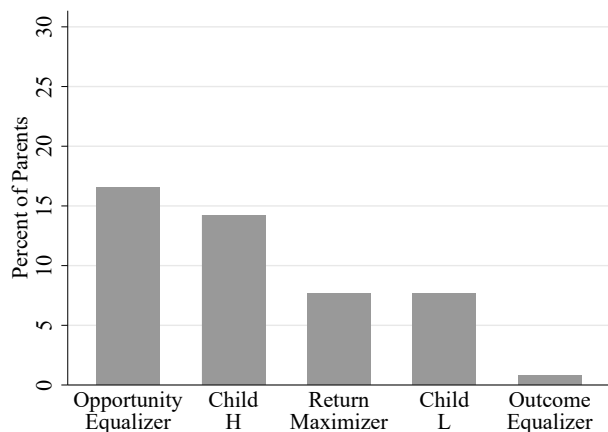
Notes: This figure presents allocation of lottery tickets across children for Scenarios 2-5 in both experiments. The panels present allocations separately for parents who gave strictly more tickets to Child H in Scenario 1 (“Prefer High”), and those who gave strictly more tickets to Child L (“Prefer Low”) in Scenario 1. The proportion of respondents in the “Prefer High” group was 0.25 in the lower-income experiment and 0.01 in the higher-income experiment. For the “Prefer Low” group the proportions were 0.13 and 0.41 respectively.

Online Appendix Figure A.2: Child-specific Preferences May Differ Across Lower-income and Higher-income Samples

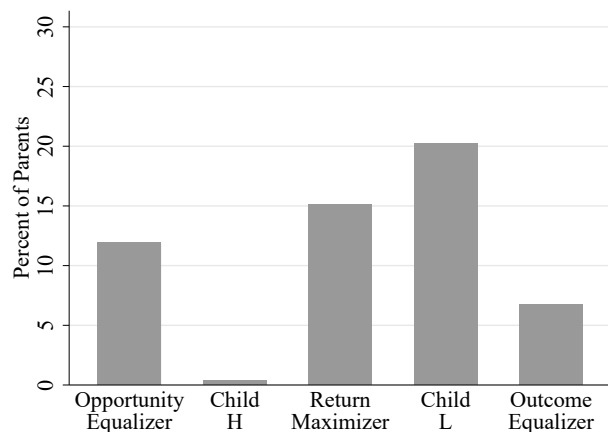


Notes: This figure shows the shares of parents allocating all tickets to Child H and those allocating all tickets to Child L in Scenario 1 (the Base Case) in both experiments, excluding parents with equal score predictions for both children. P-values for the test of equality between the lower-income and higher-income results are below 0.001 for both the All-to-Child-H and All-to-Child-L choices. Sample excludes parents who believe Child H and Child L have the same scores; if we include those parents, results are very similar (share of parents who gave all to Child H and all to Child L are 0.249 and 0.128 in the lower-income experiment and 0.011 and 0.407 in the higher-income experiment).

Online Appendix Figure A.3: Parents Have Heterogeneous Behavioral Patterns: Robustness To Excluding Parents with Equal Beliefs about their Children's Performance



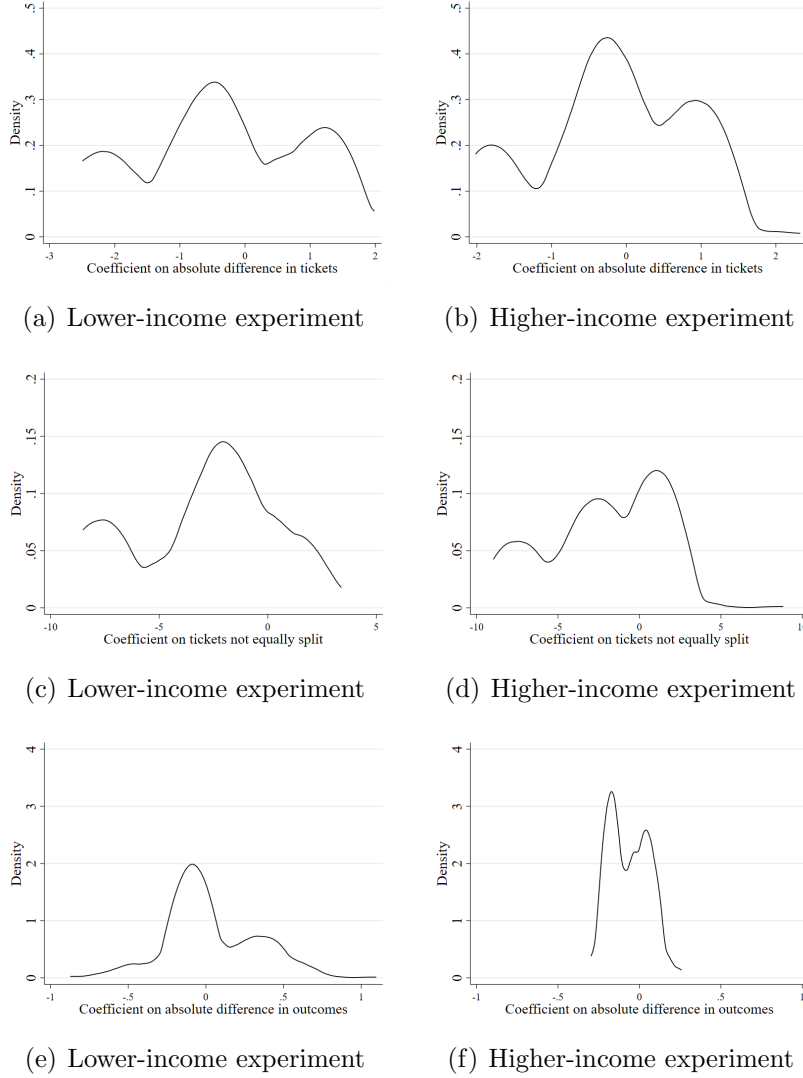
(a) Lower-income experiment



(b) Higher-income experiment

Notes: These figures present the proportion of each sample of parents who always, in each of the 5 scenarios, equalized outcomes (bar 1), maximized returns (bar 2), allocated all tickets to Child L or Child H (bars 3 and 4, respectively), or split tickets equally (bar 5), excluding parents with equal score predictions for both children. The proportion of parents who have choice patterns that do not do the same strategy on every card is 0.55 and 0.47 in the lower- and higher-income experiments respectively; this is higher than the percentage of 23% and 16% of parent $\times$ scenario observations that do not fit one of these categories (e.g., maximizing returns or equalizing inputs) in the low-income and high-income experiments, respectively, since many parents adopted mixed strategies across scenarios. We tested whether the proportion of parents in each category was equal across experiments and report the following p -values: Outcome Equalizers p -val < 0.01 , Return Maximizers p -val < 0.01 , Child L p -val < 0.01 , Child H p -val < 0.01 , Opportunity Equalizers p -val = 0.133.

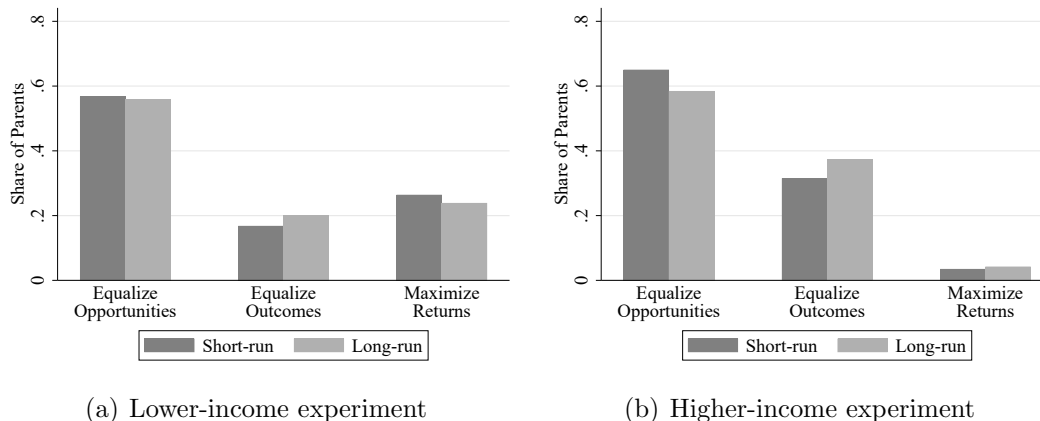
Online Appendix Figure A.4: Distribution of Parents' Preferences for Equalizing Opportunities



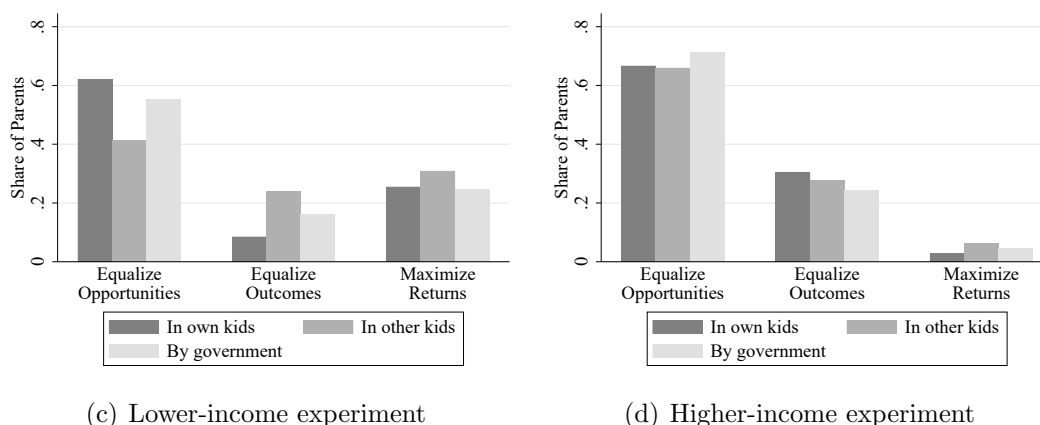
Notes: Panels (a) and (b) present the distribution of the coefficient on “Absolute difference in opportunities (tickets)” from Column 1 of Table 2. Panels (c)-(d) present the distribution of the coefficient on “Opportunities (tickets) not equally split” and Panels (e)-(f) present the distribution of the coefficient on “Absolute difference in outcomes” from Column 3 of Table 2 separately for the lower- and higher-income experiments. We use an Epanechnikov kernel function. Recall that the prediction of equality of opportunity and equality of outcomes is that the coefficients would be negative. 66% of lower- and 59% of higher-income experiment participants have a coefficient on absolute difference in tickets less than 0. 80% of lower- and 62% of higher-income experiment participants have a coefficient on tickets not equally split less than 0. 60% of lower- and 64% of higher-income experiment participants have a coefficient on absolute difference in outcomes less than 0.

Online Appendix Figure A.5: Parents State Similar Preferences Across Various Educational Investment Circumstances

Preferences over long-run (i.e. to increase future wages) and short-run (i.e. to increase test scores) investments

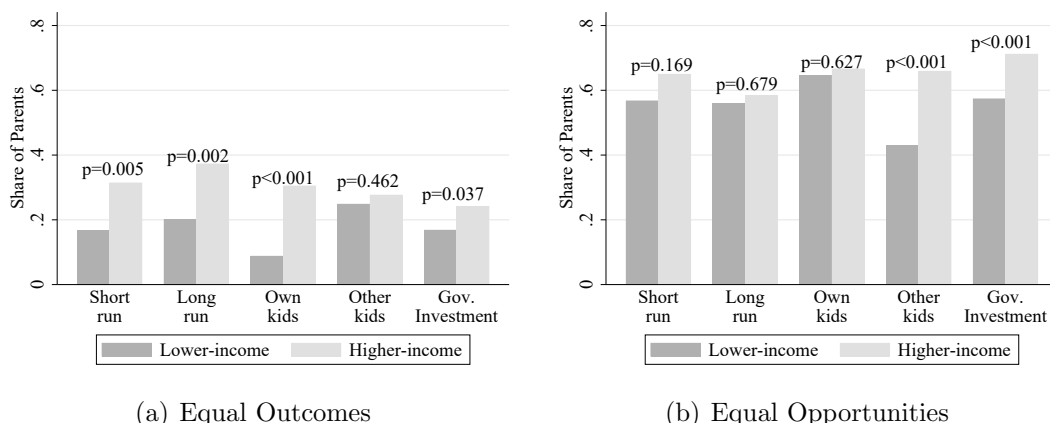


Preferences over investments from difference sources



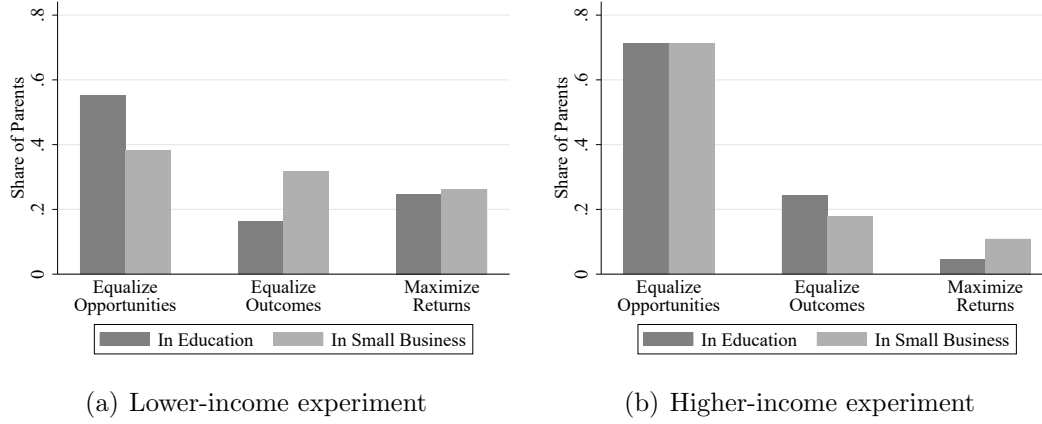
Notes: Parents were asked about their preferences over different investment circumstances. Panels (a)-(b) display preferences over investments to increase their children’s test scores (short-run) and future wages (long-run). In both experiments, half the sample was randomly asked about the short-run and the other half asked about the long-run. Panels (c)-(d) display preferences in investments in education they would make for their own children, for other peoples’ children, and that they would want the government to make in children.

Online Appendix Figure A.6: Parents in the Higher-income Experiment Consistently Express a Higher Preference to Equalize Outcomes When Distributing Educational Investments



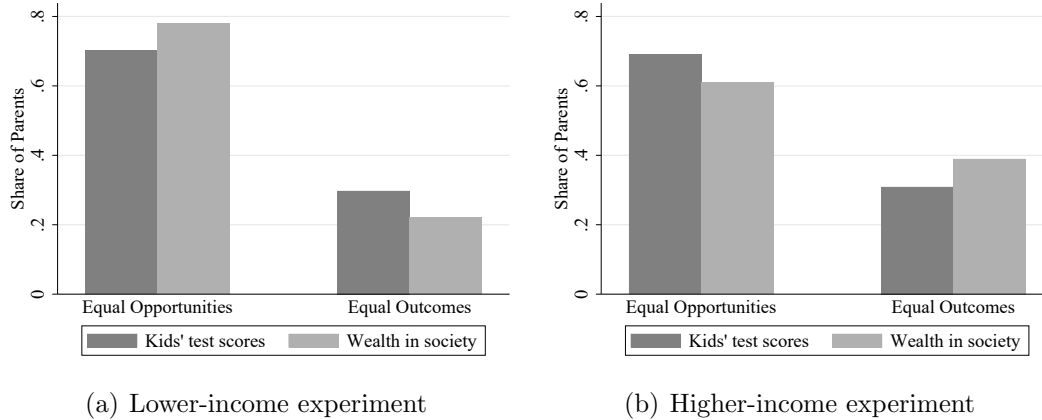
Notes: These figures display preferences for equalizing outcomes (Panel (a)) and opportunities (Panel (b)) in investments made for children’s education. The excluded option is to maximize returns. “Short-run” and “long-run” refer to investments to increase children’s test scores and future earnings, respectively. “Own kids” refers to investment in one’s own children and “other kids” refers to investment in other children. “Gov investment” refers to investment made by the government.

Online Appendix Figure A.7: Preferences Over Government Investment



Notes: This figure displays preferences over investments made by the government in education and in small business in both experiments. The “in education” bars display the same data depicted in the “by government” bars of Figures A.5(c) and A.5(d).

Online Appendix Figure A.8: Preferences Over Distributing Initial Opportunities Versus Redistributing Wealth



Notes: For the “Wealth in society” question, parents were asked to choose which of the following two statements they agree with more: A. The fairest way of distributing wealth and income in society would be to give everyone an equal amount, or, B. The fairest way of distributing wealth and income in society would be to allow everyone to keep what they have earned, as long as everyone has equal opportunities. We label choice A “Equal Outcomes” and choice B “Equal Opportunities.” For the “Kids’ test scores” question, parents were given a scenario where one child had higher ability and higher returns to test scores, and asked them to choose whether they wished to spend the “same amount on each child to give both children the same opportunities” or to “spend more on child W (the lower-ability child) to help them achieve as high a test score as their sibling.” We label the first answer “Equal Outcomes” and the latter “Equal Opportunities.”

Online Appendix Table A.1: The Majority of Parents Answered Each Understanding Question Correctly

Experiment understanding questions	Lower-income (1)	Higher-income (2)
1. Understood ticket allocation (one question)	0.96 (0.19)	0.93 (0.25)
2. Understood ticket allocation (both questions)	0.96 (0.20)	0.85 (0.35)
3. Understood returns maximization	0.88 (0.33)	.
4. Understood outcome equalization	0.94 (0.24)	.
5. Understood opportunity equalization	0.99 (0.12)	.
6. Attention check: what will your child receive if they win the lottery?	.	0.82 (0.38)
7. Attention check: what type of test is being administered?	.	0.90 (0.31)
8. Attention check: strictly dominant money game	.	0.94 (0.24)
Total Households	289	285

Notes: Questions 3-5 were only asked in the lower-income experiment while questions 6-8 were only asked in the higher-income experiment. Lower-income experiment questions were asked after practice scenario 1. In question 1, parents were asked how to definitely allocate the tutoring to one of their specific children; in question 2, they were asked how to allocate the tutoring to the other child. In questions 3-5 parents were asked how to allocate tickets in order to maximize returns, equalize outcomes, or equalize opportunities. We code them as answering the understanding question correctly if they gave the correct response (e.g., the correct response to question 1 would be to give 10 tickets to the specific child). Questions 6-8 were simple questions designed to gauge whether participants were paying attention, as is standard when implementing online experiments. For example, question 8 was added after the lottery questions in a part of the survey where we asked parents a hypothetical question about how they would split money between two people whom they did not know. In one of these scenarios (there were 5), one choice implied that both people were getting strictly more money than the other choice.

Online Appendix Table A.2: Parents' Stated Reasons Predict Their Actual Choices

	(1) Equalize Opportunities	(2) Maximize Returns	(3) Equalize Outcomes	(4) Prefer Child L	(5) Prefer Child H	(6) Share with Stated Reason
Prefer Equalizing Inputs	0.79*** (0.05)	-0.14*** (0.04)	-0.17*** (0.04)	-0.02 (0.01)	-0.13*** (0.03)	32.66%
Prefer Maximizing Returns	-0.13*** (0.05)	0.36*** (0.06)	-0.16*** (0.04)	-0.01 (0.03)	-0.13*** (0.04)	15.16%
Prefer Equalizing Outcomes	0.08 (0.09)	-0.03 (0.06)	0.00 (0.06)	-0.03* (0.02)	-0.05 (0.05)	2.91%
Prefer Child L	0.02 (0.05)	-0.02 (0.05)	0.03 (0.04)	0.06** (0.03)	-0.14*** (0.03)	22.08%
Prefer Child H	0.02 (0.05)	-0.02 (0.05)	-0.04 (0.04)	-0.04** (0.02)	0.03 (0.04)	28.44%
Scenario FE	Yes	Yes	Yes	Yes	Yes	
Household FE	Yes	Yes	Yes	Yes	Yes	
Observations	1445	1445	1445	1445	1445	1445
R^2	0.886	0.468	0.298	0.313	0.376	

Notes: This table displays data from the lower-income experiment only. (We did not collect similar data in the higher-income experiment.) The dependent variables in Columns (1)-(5) represent dummies for the actual choices parents made in a given scenario. The independent variables represent the parents' stated reasons for making those choices. Column (6) shows the share of parents whose stated reason was to equalize inputs, maximize returns, equalize outcomes, favor low ability child, and favor high ability child. These reasons were not collected in the higher-income experiment. Standard errors are in parentheses, clustered at the household level. * denotes significance at 0.10; ** at 0.05; and *** at 0.01.

Online Appendix Table A.3: Parents Equalized Opportunities in All Scenarios

Scenario	Share Equalized	
	Lower-income (1)	Higher-income (2)
1. Base Case	0.42	0.36
2. Higher Returns to Child H	0.30	0.33
3. Higher Returns to Child L	0.42	0.28
4. Lump Sum to Child L	0.36	0.36
5. Higher Returns to Child L & Lump Sum to Child H	0.33	0.24

Notes: This table reports the proportion of parents in the lower-income (column 1) and higher-income (column 2) experiments who equalized opportunities (i.e. chose the 5-5 ticket allocation) in each scenario.

Online Appendix Table A.4: Higher-Income Parents' Greater Preference for the Lower-Performing Child Is Robust to Conditioning on Child Characteristics

	Tickets to Child					
	(1)	(2)	(3)	(4)	(5)	(6)
Child L (0/1)	3.68*** (0.29)	3.60*** (0.29)	3.55*** (0.31)	3.35*** (0.30)	3.68*** (0.29)	3.28*** (0.30)
Child L (0/1) $\times$ Lower-income experiment (0/1)	-4.42*** (0.46)	-4.34*** (0.46)	-4.23*** (0.49)	-4.18*** (0.46)	-4.40*** (0.46)	-4.01*** (0.55)
Grade controls	No	Yes	No	No	No	Yes
Older child controls	No	No	Yes	No	No	Yes
Child-level returns to tutoring controls	No	No	No	Yes	No	Yes
Gender controls	No	No	No	No	Yes	Yes
Observations	5120	5120	5120	5120	5120	5120
P-val: Child L + Child L $\times$ Lower-inc. exp. = 0	0.04	0.04	0.08	0.02	0.04	0.12

Notes: This table pools data from both the lower- and higher-income experiments. Parents with equal score without tutoring predictions for both children are excluded. Observations are at the child $\times$ scenario level. The outcome variable is the number of tickets allocated to the child in each scenario. Each column includes controls for the child's grade, whether the child is older, the child's return to tutoring, and/or the child's gender, as well as interactions between the included controls and whether the child was in the lower-income experiment. (The specific controls included in each column are indicated in the 4 rows below the coefficients.) The reported p-value was obtained by testing Child L (0/1) + Child L (0/1) $\times$ Lower-income experiment (0/1) = 0. All specifications include scenario and household fixed effects. Standard errors are in parentheses and clustered at the parent-level. * denotes significance at 0.10; ** at 0.05; and *** at 0.01.

Online Appendix Table A.5: Within the Higher-Income Sample, Richer Parents Care Relatively More about Equality of Outcomes, and Less About Equality of Opportunities

	Logit estimates of equality of		
	Opportunities (continuous)	Opportunities (binary)	Outcomes
Household income (100,000s USD)	-0.31*** (0.10)	-1.40*** (0.35)	0.03** (0.01)
Observations	275	275	275
Dependent variable mean	0.17	2.08	0.07

Notes: This table displays the results of regressions of individual logit coefficients from Table 2 on household income. The dependent variables in Columns (1) and (2) are the negative of the individual coefficients on "absolute difference in opportunities" and "opportunities not equally split," respectively, estimated from Table 2, columns (1) and (3), respectively. The dependent variables in Column (3) is the negative of the individual coefficient on "absolute difference in outcomes" estimated from Table 2 columns (1). This table displays data from the higher-income experiment only. (We did not collect household income data in the lower-income experiment.) All columns control for country fixed effects. Standard errors are in parentheses, clustered at the household level. * denotes significance at 0.10; ** at 0.05; and *** at 0.01.

Online Appendix Table A.6: Mixed Logit Estimates, Controlling for Child Gender and Grade

	Dependent Variable: Chose Ticket Allocation				
	(1)	(2)	(3)	(4)	(5)
A. Lower-income experiment					
Absolute difference in opportunities (tickets)	-0.62*** (0.10)	-0.44*** (0.05)			
Opportunities (tickets) not equally split (0/1)			-3.09*** (0.28)	-2.88*** (0.29)	-3.07*** (0.27)
Absolute difference in earnings (MWK 100s)	-0.03 (0.04)	0.05 (0.05)	0.03 (0.02)	0.06** (0.03)	-0.03 (0.04)
Household earnings (MWK 100s)	0.29*** (0.07)	0.39*** (0.07)	0.21*** (0.04)	0.17*** (0.04)	
Log household earnings					6.62*** (1.59)
Opportunities (tickets) to Child L	-0.19** (0.09)	-0.16** (0.08)	-0.16*** (0.06)	-0.24*** (0.06)	-0.14*** (0.05)
Opportunities (tickets) to male child	-0.24*** (0.09)	-0.61*** (0.11)	-0.03 (0.09)	0.01 (0.07)	-0.04 (0.07)
Opportunities (tickets) to higher grade child	0.05 (0.09)	0.06 (0.09)	0.12 (0.08)	0.05 (0.07)	0.11* (0.07)
WTP for 1 ticket lower opportunity inequality (MWK 100s)	2.16	1.13			
WTP for equal opportunities (MWK 100s)			14.45	20.23	
WTP for equal opportunities (percent)					0.46
Control Function?	No	Yes	No	Yes	Yes
Observations	15,895	15,895	15,895	15,895	15,895
B. Higher-income experiment					
Absolute difference in opportunities (tickets)	-0.33*** (0.06)	-0.49*** (0.05)			
Opportunities (tickets) not equally split (0/1)			-2.73*** (0.24)	-2.72*** (0.28)	-2.92*** (0.25)
Absolute difference in earnings (USD)	-0.05*** (0.01)	-0.06*** (0.01)	-0.04*** (0.01)	-0.03*** (0.01)	-0.04*** (0.01)
Household earnings (USD)	0.10*** (0.01)	0.10*** (0.01)	0.08*** (0.01)	0.04*** (0.01)	
Log household earnings					12.46*** (1.64)
Opportunities (tickets) to Child L	0.36*** (0.06)	0.30*** (0.06)	0.34*** (0.05)	0.37*** (0.05)	0.47*** (0.06)
Opportunities (tickets) to male child	-0.06 (0.06)	-0.13* (0.07)	-0.01 (0.06)	-0.01 (0.06)	-0.03 (0.05)
Opportunities (tickets) to higher grade child	-0.11* (0.06)	-0.40*** (0.07)	-0.01 (0.06)	-0.08* (0.04)	0.03 (0.04)
WTP for 1 ticket lower opportunity inequality (USD)	3.27	5.03			
WTP for equal opportunities (USD)			32.69	48.59	
WTP for equal opportunities (percent)					0.23
WTP for 1 USD lower outcome inequality (USD)	0.55	0.60	0.53	0.62	
Control Function?	No	Yes	No	Yes	Yes
Observations	15,675	15,675	15,675	15,675	15,675

Notes: This table presents estimates of the regressions shown in Table 2, except these regressions control for the number of tickets allocated to the male child and the number of tickets allocated to the child in a higher grade. All other aspects of the regressions the same as in Table 2. * denotes significance at 0.10; ** at 0.05; and *** at 0.01.

Online Appendix Table A.7: Results Similar When Exclude Households with Same Perceived Performance for Child L and Child H

	Dependent Variable: Chose Ticket Allocation				
	(1)	(2)	(3)	(4)	(5)
A. Lower-income experiment					
Absolute difference in opportunities (tickets)	-0.30*** (0.08)	-0.34*** (0.07)			
Opportunities (tickets) not equally split (0/1)			-2.50*** (0.27)	-2.52*** (0.30)	-2.75*** (0.31)
Absolute difference in earnings (MWK 100s)	0.01 (0.04)	0.11** (0.04)	0.01 (0.03)	0.03 (0.03)	-0.03 (0.04)
Household earnings (MWK 100s)	0.25*** (0.07)	0.18*** (0.06)	0.23*** (0.04)	0.17*** (0.05)	
Log household earnings					6.35*** (1.66)
Opportunities (tickets) to Child L	-0.06 (0.09)	-0.03 (0.08)	-0.15* (0.08)	-0.19*** (0.07)	-0.22*** (0.07)
WTP for 1 ticket lower opportunity inequality (MWK 100s)	1.19	1.91			
WTP for equal opportunities (MWK 100s)			11.03	14.56	
WTP for equal opportunities (percent)					0.43
Control Function?	No	Yes	No	Yes	Yes
Observations	14,300	14,300	14,300	14,300	14,300
B. Higher-income experiment					
Absolute difference in opportunities (tickets)	-0.28*** (0.05)	-0.25*** (0.06)			
Opportunities (tickets) not equally split (0/1)			-2.41*** (0.28)	-2.31*** (0.34)	-2.57*** (0.31)
Absolute difference in earnings (USD)	-0.02*** (0.01)	-0.05*** (0.01)	-0.05*** (0.01)	-0.02*** (0.01)	-0.04*** (0.01)
Household earnings (USD)	0.07*** (0.01)	0.08*** (0.01)	0.08*** (0.01)	0.04*** (0.01)	
Log household earnings					13.39*** (1.63)
Opportunities (tickets) to Child L	0.49*** (0.08)	0.57*** (0.08)	0.45*** (0.06)	0.61*** (0.06)	0.45*** (0.06)
WTP for 1 ticket lower opportunity inequality (USD)	3.76	3.10			
WTP for equal opportunities (USD)			29.87	64.39	
WTP for equal opportunities (percent)					0.19
WTP for 1 USD lower outcome inequality (USD)	0.28	0.60	0.62	0.53	
Control Function?	No	Yes	No	Yes	Yes
Observations	13,860	13,860	13,860	13,860	13,860

Notes: This table presents estimates of the regressions shown in Table 2, except these regressions exclude parents who believed child L and child H's scores without tutoring would be the same. All other aspects of the regressions the same as in Table 2. * denotes significance at 0.10; ** at 0.05; and *** at 0.01.

Online Appendix Table A.8: After the Lower-income Experiment, Most Children Kept Their Earnings

Total Households	289				
Total Parents Surveys	259				
Total Children Surveys	392				
A. Parent Survey	Child L	Child H	High Earner	Low Earner	Equal Earner
Children with non-zero earnings	135	163	210	84	4
Children who kept earnings	82%	69%	73%	79%	100%
Children who did not keep earnings	18%	31%	27%	21%	0%
<i>Reasons children did not keep earnings</i>					
Parents didn't trust child with money	6%	10%	10%	5%	
Parents wanted to equalize outcomes	4%	2%	2%	5%	
Other reasons	8%	19%	15%	11%	
Treated children differently beyond earnings after experiment			Parents		
			8%		
B. Child Survey	Child L	Child H	High Earners	Low Earner	Equal Earner
Children Surveyed	190	202	193	196	3
Children with non-zero earnings	125	150	193	79	3
Children who kept earnings	75%	77%	74%	81%	100%
Children who did not get to keep earnings	25%	23%	26%	19%	0 %
<i>Reasons children did not keep earnings</i>					
Parents took earnings	5%	5%	5%	5%	
Parents gave it sibling	2%	1%	2%	0%	
Other reasons	18%	16%	19%	14%	
Children treated differently beyond earnings after experiment	7%	13%	9%	13%	
<i>How children were treated differently</i>					
Parent gave extra money	6%	5%	5%	6%	
Parent gave sibling extra money	4%	1%	2%	3%	
Parent gave some other gifts	1%	0%	1%	0%	
Parent gave sibling some other gifts	0%	1%	1%	0%	
Parent gave sibling less money	2%	0%	1%	0%	
Other reasons	6%	1%	3%	5%	

Notes: This table displays data from the lower-income experiment only. It presents parents' and children's responses from the follow-up survey where they were asked questions about (i) reallocation of children's earnings after the experiment and (ii) treatment of children by parents after the experiment on dimensions other than experimental earnings (e.g., other money or gifts). All percentages are percentages of the sample of children with non-0 earnings. This data is not available in the higher-income experiment because children did not earn real payments.

Online Appendix Table A.9: Mixed Logit Estimates are Qualitatively Consistent Across Various Samples

	Full Sample (1)	Positive Returns (2)	Understood Allocation (3)	Understood Returns Max. (4)	Understood Equal. Out. (5)	Understood Equal. Opp. (6)	Placebo Correct (7)	Understood All (8)
A. Lower-income experiment								
Tickets not equally split (0/1)	-2.922*** (0.266)	-2.729*** (0.259)	-3.057*** (0.241)	-2.766*** (0.325)	-2.450*** (0.264)	-2.912*** (0.258)	-2.801*** (0.251)	-2.977*** (0.590)
Absolute difference in outcomes (MWK 100s)	0.013 (0.027)	0.020 (0.028)	0.013 (0.024)	0.097*** (0.032)	0.048 (0.030)	-0.016 (0.021)	0.024 (0.024)	0.056 (0.039)
Household earnings (MWK 100s)	0.228*** (0.047)	0.217*** (0.039)	0.205*** (0.038)	0.210*** (0.042)	0.247*** (0.045)	0.217*** (0.041)	0.221*** (0.044)	0.256*** (0.053)
<i>N</i>	15895	14740	15235	13915	14905	15675	15400	12925
Individuals	289	268	277	253	271	285	280	235
% Scenarios Equalized	37	35	37	36	37	37	37	36
	Full Sample (1)	Positive Returns (2)	Understood Allocation (3)	Attention Checks (4)	Understood All (5)			
B. Higher-income experiment								
Tickets not equally split (0/1)	-1.945*** (0.280)	-2.880*** (0.292)	-2.566*** (0.288)	-2.580*** (0.278)	-2.841*** (0.354)			
Absolute difference in outcomes (USD)	-0.067*** (0.009)	-0.038*** (0.007)	-0.058*** (0.010)	-0.086*** (0.014)	-0.116*** (0.012)			
Household earnings (USD)	0.108*** (0.010)	0.060*** (0.008)	0.143*** (0.015)	0.123*** (0.015)	0.155*** (0.013)			
<i>N</i>	15675	12980	12705	12375	10395			
Individuals	285	236	231	225	189			
% Scenarios Equalized	31	33	30	28	26			

Notes: Panel A presents results from the lower-income experiment and Panel B presents results from the higher-income experiment. In both Panel A and Panel B, column 1 includes all parents for reference, and hence replicates column 3 of Table 2. Column 2 includes all parents who believed both children's test scores would increase after tutoring, and column 3 includes parents who correctly understood how to definitely allocate (i.e allocate 10 tickets) tutoring to each child. In Panel A, column 4 includes parents who understood a question about how to allocate tickets to maximize returns, column 5 includes those who understood how to equalize outcomes and column 6 includes those who understood how to equalize opportunities. Column 7 includes parents who allocated their tickets to the larger prize in the placebo lottery (see Figure 4) and column 8 includes parents who were in all of columns 3-8. In Panel B, column 4 includes parents who answered all attention checks correctly and column 5 includes all parents included in both columns 3 and 4.

Online Appendix Table A.10: Covariances and Standard Deviations of Individual-Level Logit Coefficients in the Lower-Income Experiment

	SD and Covariances of logit coefficients				
	(1)	(2)	(3)	(4)	(5)
A. Covariances of Logit Coefficients					
Opportunity equality, Household earnings	-0.19*** (0.04)	-0.65*** (0.10)	-0.61*** (0.19)	-0.76*** (0.20)	-13.88** (5.94)
Opportunity equality, Outcome equality	0.15*** (0.04)	0.10 (0.08)	0.24** (0.11)	0.26* (0.15)	0.12 (0.16)
Household earnings, Outcome equality	0.16*** (0.06)	0.01 (0.04)	0.08*** (0.03)	0.01 (0.02)	4.03*** (1.13)
Opportunity equality, Tickets to Child L	0.10 (0.12)	0.20 (0.19)	-0.49 (0.39)	-0.13 (0.51)	-0.08 (0.64)
Outcome equality, Tickets to Child L	0.15*** (0.04)	-0.12** (0.06)	0.12*** (0.03)	-0.06** (0.03)	-0.05*** (0.02)
Household earnings, Tickets to Child L	-0.14*** (0.04)	-0.45*** (0.11)	0.02 (0.03)	-0.21*** (0.07)	-2.32** (1.07)
B. Correlation of Logit Coefficients					
Opportunity equality, Household earnings	-0.20	-0.59	-0.29	-0.35	-0.22
Opportunity equality, Outcome equality	0.24	0.56	0.20	0.68	0.13
Household earnings, Outcome equality	0.53	0.12	0.51	0.25	0.94
Opportunity equality, Tickets to Child L	0.06	0.09	-0.12	-0.03	-0.02
Outcome equality, Tickets to Child L	0.29	-0.67	0.41	-0.57	-0.18
Household earnings, Tickets to Child L	-0.18	-0.43	0.03	-0.36	-0.13
C. SDs of Logit Coefficients					
Minus absolute difference in opportunities (tickets)	1.42*** (0.11)	1.48*** (0.11)			
Opportunities (tickets) equally split (0/1)			3.99*** (0.43)	4.12*** (0.47)	3.81*** (0.38)
Household earnings	0.68*** (0.08)	0.75*** (0.09)	0.52*** (0.06)	0.53*** (0.05)	
Minus absolute difference in earnings	0.44*** (0.06)	0.12** (0.05)	0.30*** (0.04)	0.09** (0.04)	0.25*** (0.05)
Opportunities (tickets) to Child L	1.14*** (0.13)	1.40*** (0.14)	0.98*** (0.07)	1.10*** (0.08)	1.03*** (0.08)
Log household earnings					16.83*** (1.76)
Observations	15895	15895	15895	15895	15895

Notes: This table shows the covariance, correlations and standard deviations for the random coefficients estimated in Table 2 in the lower-income experiment. For ease of presentation, we calculate and display the covariance and correlations for the *negative* of Opportunities (tickets) not equally split (0/1) and Absolute difference in earnings, that is, Opportunities (tickets) equally split (0/1) and Minus absolute difference in earnings, referred to as Input equality and Outcome equality in panels A and B. The standard deviations of the covariance and standard deviation estimates are in parentheses. * denotes significance at 0.10; ** at 0.05; and *** at 0.01.

Online Appendix Table A.11: Covariances and Standard Deviations of Individual-Level Logit Coefficients in the Higher-Income Experiment

	SD and Covariances of logit coefficients				
	(1)	(2)	(3)	(4)	(5)
A. Covariances of Logit Coefficients					
Opportunity equality, Household earnings	-0.10*** (0.02)	-0.12*** (0.02)	-0.24*** (0.05)	-0.08*** (0.03)	-21.60
Opportunity equality, Outcome equality	-0.10*** (0.02)	-0.12*** (0.02)	-0.19*** (0.05)	-0.08*** (0.03)	-0.13
Household earnings, Outcome equality	0.02*** (0.00)	0.02*** (0.00)	0.01*** (0.00)	-0.00*** (0.00)	1.54
Opportunity equality, Tickets to Child L	-0.13** (0.05)	-0.14* (0.07)	-1.25*** (0.29)	-0.02 (0.33)	-1.11
Outcome equality, Tickets to Child L	0.02* (0.01)	0.01 (0.01)	0.01* (0.01)	-0.00 (0.01)	0.01
Household earnings, Tickets to Child L	0.02* (0.01)	0.02** (0.01)	0.02*** (0.01)	0.02*** (0.01)	0.41
B. Correlation of Logit Coefficients					
Opportunity equality, Household earnings	-0.58	-0.53	-0.44	-0.41	-0.25
Opportunity equality, Outcome equality	-0.66	-0.62	-0.39	-0.40	-0.38
Household earnings, Outcome equality	0.82	0.78	0.75	-0.60	0.59
Opportunity equality, Tickets to Child L	-0.25	-0.20	-0.42	-0.01	-0.39
Outcome equality, Tickets to Child L	0.22	0.09	0.14	-0.05	0.06
Household earnings, Tickets to Child L	0.19	0.19	0.18	0.41	0.02
C. SDs of Logit Coefficients					
Minus absolute difference in opportunities (tickets)	1.07*** (0.07)	1.17*** (0.09)			
Opportunities (tickets) equally split (0/1)			4.13*** (0.43)	3.42*** (0.31)	3.36
Household earnings	0.17*** (0.02)	0.19*** (0.02)	0.13*** (0.01)	0.06*** (0.01)	
Minus absolute difference in earnings	0.15*** (0.02)	0.16*** (0.01)	0.12*** (0.01)	0.06*** (0.01)	0.10
Opportunities (tickets) to Child L	0.49*** (0.06)	0.57*** (0.05)	0.72*** (0.05)	0.72*** (0.05)	0.85
Log household earnings					25.83
Observations	15675	15675	15675	15675	15675

Notes: This table shows the covariances, correlations and standard deviations for the random coefficients estimated in Table 2 in the lower-income experiment. For ease of presentation, we calculate and display the covariances and correlations for the *negative* of Opportunities (tickets) not equally split (0/1) and Absolute difference in earnings, that is, Opportunities (tickets) equally split (0/1) and Minus absolute difference in earnings, referred to as Input equality and Outcome equality in panels A and B. The standard deviations of the covariance and standard deviation estimates are in parentheses. Column 5 only displays point estimates since calculation of standard deviations did not converge for this specification. * denotes significance at 0.10; ** at 0.05; and *** at 0.01.

B Section 2 Proofs

In Section 2, we show that, if parents who are expected-utility maximizers with preferences shown in equation (2) do not care about equality (i.e., if $\alpha = 0$ and $\beta = 0$), then they should choose all-or-nothing allocations of tickets. In this section, we first show that this prediction is robust to a different form of expected utility preference. We then show that it is robust to classic prospect theory preferences, and other similar non-expected-utility preferences.

Alternate Expected Utility Preferences An alternate formulation of the utility function of a returns-maximizing parent could be that the returns maximization term is $Eu(R_1(x_1)) + Eu(R_2(x_2))$ instead of $Eu(R_1(x_1) + R_2(x_2))$. The prediction that parents who do not care about equality will only choose all-or-nothing allocations still goes through in this case. To see this, set $\alpha = 0$ and $\beta = 0$ and note that equation (2) becomes:

$$U(t_1, t_2) = \lambda(t_1 [Eu(R_1(1)) + Eu(R_2(0))] + t_2 [Eu(R_1(0)) + Eu(R_2(1))]) + \gamma(z_1, z_2)(t_1 - t_2) \quad (6)$$

Utility is thus again linear in t_1 and t_2 , and hence parents will again in general choose “all-or-nothing” corner solutions.⁵⁶

Non-Expected-Utility Preferences (e.g., Prospect Theory) Define $\pi(p)$ as the “probability weighting” function or the actual probability weight a parent places on an event whose true probability of occurrence is p . Let $\pi(p)$ be increasing and let $\pi(0) = 0$ and $\pi(1) = 1$. Note that $\pi(p)$ is not necessarily equal to p for $0 < p < 1$.

A sufficient condition for our prediction (that parents who do not care about equality will choose all-or-nothing allocations) to hold is that $\pi(p) + \pi(1 - p) \leq 1$ for all $0 \leq p \leq 1$.⁵⁷ Intuitively, this condition means that parents understand that choosing split allocations does not increase their chance of winning the lottery.

⁵⁶The equation for the knife-edge case where the parent is exactly indifferent from footnote 19 then becomes $Eu(R_1(1)) + Eu(R_2(0)) + \gamma(z_1, z_2) = Eu(R_1(0)) + Eu(R_2(1)) - \gamma(z_1, z_2)$.

⁵⁷To see that this is sufficient, let $\alpha = 0$ and $\beta = 0$. With probability weighting, equation (2) becomes:

$$U(t_1) = \lambda(\pi(t_1) [Eu(R_1(1)) + Eu(R_2(0))] + \pi(1 - t_1) [Eu(R_1(0)) + Eu(R_2(1))]) + \gamma(z_1, z_2)(\pi(t_1) - \pi(1 - t_1)). \quad (7)$$

Let $A = \lambda[Eu(R_1(1)) + Eu(R_2(0))] + \gamma(z_1, z_2)$ and $B = \lambda[Eu(R_1(0)) + Eu(R_2(1))] - \gamma(z_1, z_2)$ and, without loss of generality, let $A > B$ (that is, consider the case where the parent would prefer to give the tutoring to child 1). Equation (7) can then be rewritten as

$$U(t_1) = \pi(t_1)A + \pi(1 - t_1)B. \quad (8)$$

Our objective is to show that $U(t_1)$ is maximized at $t_1 = 1$. Equation (8) and the fact that $A > B$ imply

$$U(t_1) \leq \pi(t_1)A + \pi(1 - t_1)A, \quad (9)$$

which, combined with the condition that $\pi(t) + \pi(1 - t) \leq 1$, implies that

$$U(t_1) \leq A. \quad (10)$$

Since $U(1) = A$, this implies that $U(t_1) \leq U(1)$ for all $0 \leq t_1 \leq 1$, as desired.

Most non-expected-utility weighting functions that the literature has used satisfy this condition that $\pi(p) + \pi(1-p) \leq 1$. For example, the classic weighting function proposed in the seminal prospect theory paper by Tversky and Kahneman (1992) satisfies it.⁵⁸ Intuitively, if people prefer certainty (as prospect theory suggests), which means that $\pi(p) < p$ when p is close to 1, then that makes the condition likely to hold. If people have probability weighting functions that are concave at the bottom and convex at the top (as again suggested by prospect theory) then that also often satisfies the condition as long as the function is not steeper near 0 than it is near 1, as in the Tversky and Kahneman (1992) function.

In our specific setting, we show that the $\pi(p) + \pi(1-p) \leq 1$ condition likely holds by conducting a “placebo lottery,” which suggests that parents understand that choosing split allocations does not increase their chances of winning the lottery.

⁵⁸Specifically, their weighting function is $\pi(p) = \frac{p^\delta}{(p^\delta + (1-p)^\delta)^{\frac{1}{\delta}}}$ for $0 < \delta \leq 1$, which satisfies the condition.

C Additional Detail on Experimental Design

The full experimental scripts and visual aids for both the lower- and higher-income experiments are available in Online Appendix G.

C.1 Implementation and Procedures

C.1.1 Lower-Income Experiment

We recruited roughly 300 parents with two children enrolled in grade 5 through grade 7 in government schools in southern Malawi during December of 2017. Roughly a week prior to the experiment, participating parents completed a baseline survey that elicited demographic information, investments, and attitudes regarding their children’s education. At this time, surveyors also described the math test that the children would take and measured parents’ beliefs about each of their children’s expected test score without tutoring, expected test score gains from tutoring, and the certainty of their beliefs. On the day of the experiment, parents were reminded of their beliefs and given a chance to change their responses if they wished. Surveyors then described the experimental design and conducted the experiment. Both the elicitation of parents’ beliefs and their lottery ticket allocations in the experiment were conducted privately, when children were not present.

Explanation of Design and Understanding Checks We began with a “placebo” lottery designed to verify whether parents understood how to maximize monetary returns in a lottery environment; for the very few parents who did not understand, we then explained how to do so. Next, we gave parents an overview of the experiment. After describing the test, the payments, and the tutoring, surveyors explained how parents would allocate lottery tickets across their children. To make this explanation concrete, surveyors walked parents through a sample tutoring lottery with fake tickets.

Surveyors then walked parents through two “practice” scenarios. The practice scenarios used different payment functions than those used in the actual experiment but were explained in the same way as the experimental scenarios.

For both the practice scenarios and those used in the experiment, surveyors explained the procedure as follows. They began by describing the payment function for that scenario. They then walked parents through two visual aids, one graphical and one table-based. The table displayed the expected payments for each child for each of the 11 ticket allocations the parents could choose and was copied directly from the tablet. The graph used for the first practice scenario displayed the same information, in addition to the total expected payments for each of the 11 ticket allocations. Specifically, the graph clearly displayed the total expected payments as well as child-specific expected payments for each potential allocation (allowing the parent to observe the returns-maximizing and outcomes-equalizing allocations), but did not display anything about the difference in opportunities. To decrease the time needed for drawing the graphs, the graph used for the subsequent practice scenario and all experimental scenarios displayed the same information (each child’s expected payments as well as total expected payments) but for two potential ticket allocations only: the ticket allocations that gave all tickets to child L, or all tickets to child H. This design choice was made to minimize the time needed to draw the graphs, but, since the returns maximizing as well as the outcomes-equalizing choices were one of the two depicted allocations in nearly all cases (100% of cases for returns-maximization and 95% for outcomes equalization), these

were almost always displayed. All graphs were drawn based on instructions from the tablet, which used parents’ beliefs and the specific scenario to calculate expected payoffs under each ticket allocation.

As mentioned earlier, as part of the explanations, surveyors also told parents how to allocate their tickets if they wanted to maximize returns, equalize outcomes, equalize opportunities, or guarantee that one child received the tutoring. Finally, before we elicited allocations for the practice scenarios only, we asked parents questions to test their understanding of how to allocate tickets to achieve each of the goals above. No such questions were asked before the real experimental scenarios.

After the practice payment function scenarios, surveyors explained to parents that they would now be given 5 real experimental scenarios, and that the actual payment function scenario would be chosen by lottery from the 5 experimental scenarios. As part of the explanation, surveyors conducted a sample “scenario lottery” to concretely illustrate how the strategy method worked in this context.

The Experiment After the practice scenarios and explanation of the lottery, parents made their 5 actual experimental lottery ticket allocations. Surveyors explained each scenario following the procedure described above, and parents made their selections.⁵⁹

After parents made their ticket allocations, we used the following steps to determine which child in each household would receive tutoring. First, surveyors’ tablets randomly selected one scenario. Second, surveyors assigned the 10 tickets to children based on their parents’ allocation for that scenario. Third, parents blindly selected one of the tickets. For example, if the parent had allocated five tickets to each child for the selected scenario, the surveyor wrote the initials of each child on five out of the ten tickets, and asked the parent to pick a ticket out of a hat to select the winner of the lottery.

We then conducted the real-stakes tutoring, test, and payments.⁶⁰ To deliver the cash payments, all the children and the remaining parents gathered in a classroom after the test. Surveyors called each child to the front of the room to receive his or her cash in an individual envelope. The amounts were not announced publicly.

C.1.2 Higher-Income Experiment

We recruited roughly 300 parents using the online platform Prolific in February to May of 2021. Our inclusion criteria were that the parent must have at least two children enrolled in school and that the eldest sibling must be 9-18 years of age.^{61,62}

There are two primary differences between the lower-income and higher-income experiments: the stakes and the mode of delivery. First, the higher-income experiment was

⁵⁹To ensure parent understanding, when surveyors explained a new scenario, they would not just explain the payment function but also specify what had changed relative to the payment function from the previous scenario. To keep this explanation uniform and easy for surveyors to master, we did not randomize the order in which scenarios were presented. However, because the payment function parameters do not move monotonically with the order in which they were presented, it is unlikely that order effects drive our results.

⁶⁰For students who did not receive tutoring, there were no specific requirements during the hour. They typically spent the time either sitting idly or engaging in activities on the playground.

⁶¹In the lower-income experiment, we used a narrower range of ages/grades because we had to implement the tests and so each extra grade included in the sample increased the logistical costs entailed. In the higher-income experiment, we increased the range to be able to ensure we had enough parents in the sample.

⁶²We instructed parents who had more than one younger child to answer the questions for their two oldest children enrolled in school.

hypothetical, not real-stakes. None of the tutoring, test, or payment stages depicted in Figure 1 were conducted in the higher-income experiment. All explanations and scripts made clear that the experiment was hypothetical by, for example, asking parents to *imagine* that their children were to take a math test and be paid for it. Second, the experiment was conducted online, not in-person. The role of the surveyor from the lower-income experiment was performed almost exactly by detailed “explanation screens”, interactive graphs, tables, and mouseovers.

There are also several smaller differences between experiments. First, to keep the online experiment short, in the baseline survey, we only collected basic demographic information. The survey was also administered immediately before the experiment (not on separate days). Second, during the explanation of the design, we assessed respondent understanding in different ways. We did not include the “placebo” lottery or “practice” scenarios.⁶³ Instead, before we elicited ticket allocations for the first scenario, we included five questions that tested respondent understanding of the experimental design (Online Appendix Table A.1). Two were questions asked in the lower-income experiment during the practice scenarios, and three were “attention check” style questions to test whether participants had been paying attention to the explanations. Third, during the actual experimental scenarios, we did not ask parents their rationales, again to keep the experiment short and focused. Finally, we did not conduct a follow-up survey, and so incorporated the module gathering stated preferences about equality (conducted during the follow-up survey of the lower-income experiment) into the Confounds survey.

C.2 Choosing Payment Function Parameters

The values for parameters B_L , C_L , B_H and C_H differ across the lower-income and higher-income experiments; however, the method used to choose them was consistent. For the multiplicative parameters (C_L and C_H) in the lower-income experiment, we chose values that yielded reasonably high-stakes payment functions to have good identification. When designing the higher-income experiment, we then simply scaled values down by a factor of 10 to reflect the fact that payment was made in USD as opposed to MWK. For the lump sum parameters (B_L and B_H) relevant for scenarios 4 (*Lump Sum to Child L*) and 5 (*Higher Returns to Child L & Lump Sum to Child H*), the values in both experiments were informed by pilot data we collected before the experiments. During piloting, we elicited parent’s beliefs about their children’s test scores and determined their payment thresholds. Using this data, we were able to determine the proportion of parents for whom the outcome-inequality-minimizing prediction was to give all the tickets to Child H in scenario 4 and all tickets to child Child L in scenario 5. Then, separately for each experiment, we solved for the values of B_H and B_L that made these proportions approximately 1.

C.3 Scenario Order

The experiment presented the scenarios to respondents in the following order:

1. Base Case

⁶³Our reasons for excluding these elements were that almost all parents in our lower-income experiment understood the lottery environment; the higher-income experiment was conducted in higher-literacy countries and so we expected understanding to be even higher; and, we wanted to keep the pre-experiment portion short to ensure that parents focused on the actual experimental scenarios.

2. Lump Sum to Child L
3. Higher Returns to Child H
4. Higher>Returns to Child L & Lump Sum to Child H
5. Higher Returns to Child L

This order was optimized during piloting to facilitate respondent understanding of the payment functions. This order of payment functions changes the lump sum parameter B and the slope parameter C separately before changing them together. For ease of exposition, we changed the order of presentation in the paper.

D Robustness Checks

In this section, we first discuss and provide evidence against a set of possible confounds for our finding that parents highly value equality of opportunity. We then do the same for our findings regarding the value of equality of outcomes and, in particular, for our finding that parents in the lower-income experiment do not appear to value equality of outcomes. Finally, we provide evidence that the explanations we gave to parents are not responsible for our experimental results.

D.1 Equality of Opportunities

Parents did not choose to equalize opportunities due to beliefs uncertainty. Neoclassical risk aversion through concave utility should not cause splitting in our experiment. However, there could still be behavioral channels through which risk aversion might cause parents to choose split allocations. To address this, we perform a heterogeneity analysis based on baseline measures of uncertainty in parents' beliefs. We fail to find evidence that more uncertain parents equalize more in either experiment; see Online Appendix Figure D.1.

We can also provide more direct evidence: After the lower-income experiment, we asked parents whether they would have allocated differently if they were certain about the scores their children would receive with and without tutoring.⁶⁴ Only 2 out of 289 parents replied in the affirmative. Thus, uncertainty does not seem to be causing split allocations here.

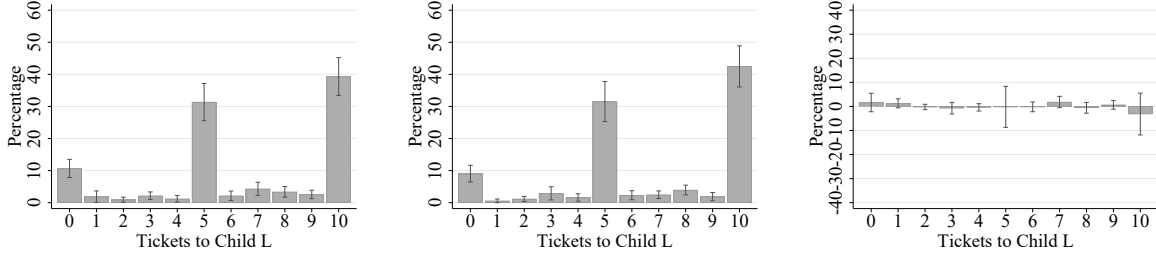
Indifference does not explain why parents evenly split their tickets. If parents are completely indifferent about which of their children receives tutoring, they could split their tickets evenly, even if they are pure returns-maximizers. However, indifference should create an even distribution on allocations $1/9$ through $9/1$, whereas there is a clear spike at $5/5$. In addition, we find that 19% of lower-income parents and 15% of higher-income parents equate in all scenarios, which should not reflect indifference. If a given parent is indifferent between her children in the base case, then when we offer 10x higher returns per point to Child H (scenario 2) or Child L (scenario 3), the parent should no longer be indifferent, but many parents continue to equalize. Moreover, indifference is a knife's edge and hence an empirically improbable case.

Parents did not split their opportunities to balance a preference for returns-maximization with other desires (e.g., equality of outcomes). The spike at equal allocation makes it unlikely that parents are splitting in order to balance competing desires, as all desires should be smooth through the equal allocation point. To further rule out the possibility that parents split opportunities in order to balance competing desires, we show that parents still choose a substantial share of split allocations in scenarios where the returns-maximizing and outcomes-equalizing allocations are the same. In the *Higher Returns to Child L & Lump Sum to Child H* scenario, both returns maximization and equality of outcomes dictate that almost all parents should allocate all tickets to Child L. The fact that Table A.3 shows that 33% of parents in the lower-income experiment and 24% of parents in the higher-income experiment still choose equal opportunities in that scenario provides further evidence that equalizing tickets reflects an aversion to opportunity inequality, not a desire to balance

⁶⁴We did not ask this question in the higher-income experiment to keep the survey brief.

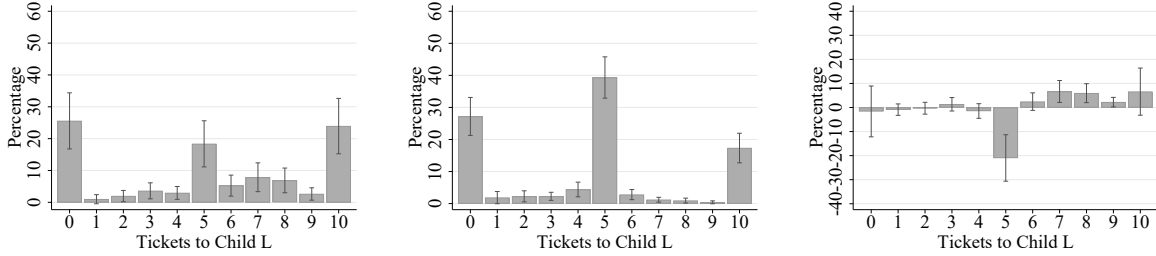
Online Appendix Figure D.1: More Uncertain Parents Did Not Equalize Opportunities More

Higher-income experiment: Heterogeneity by parents' baseline measure of uncertainty



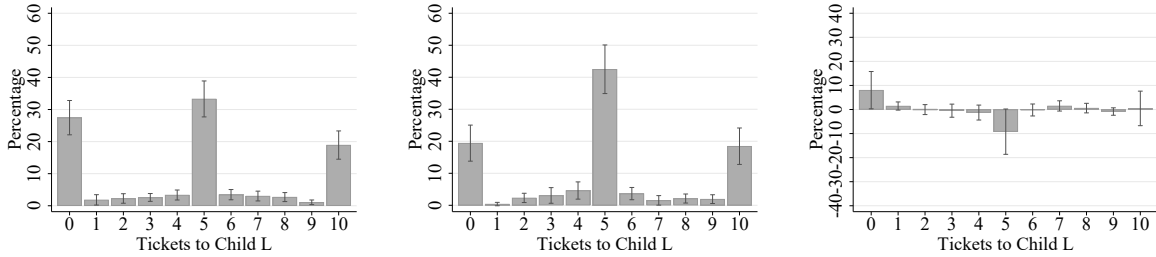
(a) Parents who are uncertain about their beliefs ($n = 137$) (b) Parents who are certain about their beliefs ($n = 148$) (c) Difference in means (uncertain - certain) ($n = 285$)

Lower-income experiment: Heterogeneity by parents' baseline measure of uncertainty



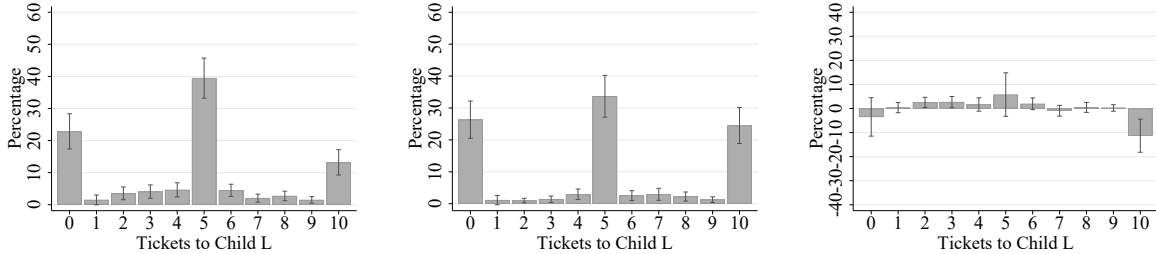
(d) Parents who are uncertain about their beliefs ($n = 61$) (e) Parents who are certain about their beliefs ($n = 150$) (f) Difference in means (uncertain - certain) ($n = 211$)

Lower-income experiment: Heterogeneity by whether parents changed beliefs after baseline



(g) Parents who changed their beliefs ($n = 185$) (h) Parents who did not change their beliefs ($n = 104$) (i) Difference in means (changed - did not change) ($n = 289$)

Lower-income experiment: Heterogeneity by difference between parents' beliefs and actual scores



(j) Difference between beliefs and actual scores above median ($n = 147$) (k) Difference between beliefs and actual scores below median ($n = 142$) (l) Difference in means (Difference in means (above-median - below-median) ($n = 289$))

Notes: This figure presents allocation of lottery tickets across children pooled across Scenarios 1-5, separately by beliefs uncertainty. Whiskers represent 95% confidence intervals for each allocation or difference in allocations. We use three measures of uncertainty. Number of parents is presented in parentheses below each panel. Panels (a)-(f) use parents' response to the question "How certain are you about each of these scores?" after they were asked to state their beliefs about their children's scores during the baseline survey. Panels (a)-(c) present data from the higher-income experiment and panels (d)-(f) present data from the lower-income experiment. Parents had to pick a score between 0 and 10, with 0 indicating 'no idea' and 10 indicating 'very certain'. We define parents who are certain about their beliefs as those who chose a number above the median. In the lower-income experiment, 73% of parents answered this question, and all parents answered this question in the higher-income experiment. Panels (g)-(l) present data from the lower-income experiment only. Panels (g)-(i) use a variable that takes a value of 1 if parents changed their beliefs between the baseline survey and experimental visit, and 0 if they did not change their beliefs. Panels (j)-(l) use a variable that takes value of 1 if the absolute value of the gap between the parents' beliefs and their children's true scores was above the median and 0 if it is below the median.

returns-maximization against a preference for equality of outcomes.

To address the possibility that parents are balancing child-specific preferences with other desires, Online Appendix Figure D.2 shows that we get similar results in the *Higher Returns to Child L & Lump Sum to Child H* scenario when excluding parents who appear to have a child-specific preference for Child H. For such parents, child-specific preferences, equality of outcomes, and returns-maximization should all lead them to the same child (Child L), and so splitting should not represent a balance of competing desires. However, those parents still split their tickets equally in a high share of cases.

Online Appendix Figures D.3(a) and D.3(b) present additional evidence from other scenarios, limiting the sample to people with $R_L < R_H$ in order to have only one ticket allocation prediction per strategy per scenario. The left bar pools all parent $\times$ scenario observations where equality of outcomes and returns maximization have different predictions (and thus splitting tickets could represent a balance between the two forces). The right bar shows all parent $\times$ scenario observations where inequality aversion in outcomes and returns maximization have the same prediction (and thus splitting tickets would not represent a balance between the two). Parents equalize in nearly as many scenarios in the right subfigures as the left subfigures, suggesting that the vast majority of “splitting” represents a preference for equality of opportunity.⁶⁵

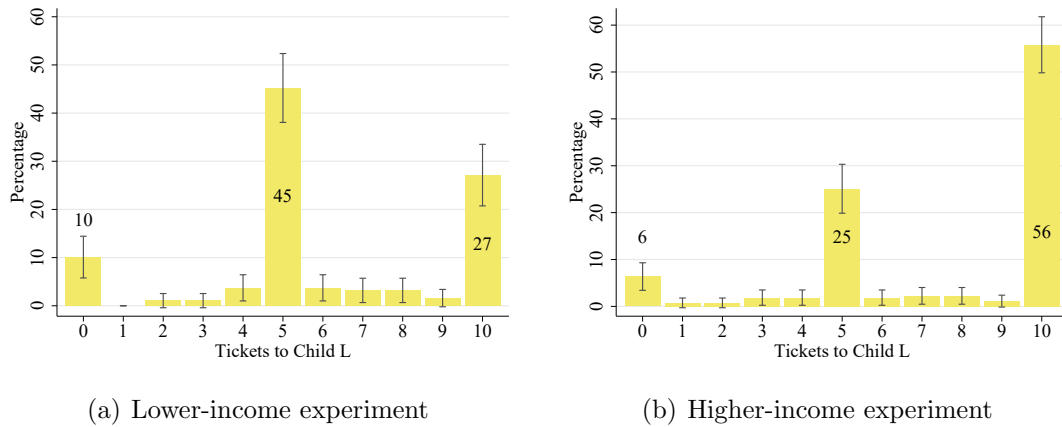
Parents did not choose to equalize opportunities because it was simpler to do. It is unlikely that parents equalized opportunities because it was less cognitively costly relative to equalizing outcomes or maximising returns for three reasons. First, for each scenario, we explicitly highlighted the exact ticket allocation that would maximize returns, equalize outcomes, equalize opportunities, or guarantee that one child got the tutoring. Therefore, it is unlikely that the equalizing ticket allocation required less cognitive effort than other choices. Second, after we elicited allocations for each scenario in the lower-income experiment, we asked parents about the rationale behind their chosen allocation (Table A.2). We show that parents’ stated rationales line up well with their actual choices. Third, as we discussed in Section 4.3, the consistency of our experimental results with simple survey responses also suggests that the experimental results capture parents’ true preferences.

D.2 Equality of Outcomes

***Ex post* redistribution does not explain the absence of outcomes equalization in the lower-income experiment.** If the potential to redistribute cash rewards *ex post* was more salient to parents in our lower-income experiment than the (hypothetical) higher-income experiment, this could explain why we see less equalizing of outcomes *ex ante* in our lower-income experiment. However, the evidence presented in Section 4.4 suggested that parents largely did not redistribute unequal earnings in the lower-income experiments, making this explanation unlikely. Of course, what really matters is the lower-income parents’ perceptions at the time they allocated opportunities about their likelihood of engaging in *ex post* reallocation, which could be different from the realized level of *ex post* reallocation. The fact that the realized level of *ex post* redistribution was very low does suggest, however,

⁶⁵We find similar results when we include the full sample of households but limit the scenarios to those in which the predictions are uniform across nearly all households (Scenarios 2, 3, and 5) (Online Appendix Figures D.3(c) and D.3(d)).

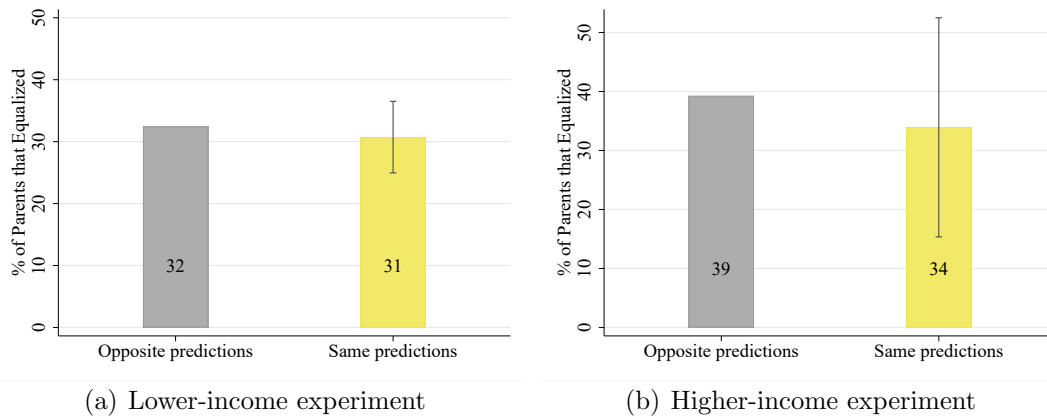
Online Appendix FigureD.2: Even Parents Who Do Not Have a Child-specific Preference for Child H Equalized in Scenario 5 (Higher Returns to Child L & Lump Sum to Child H)



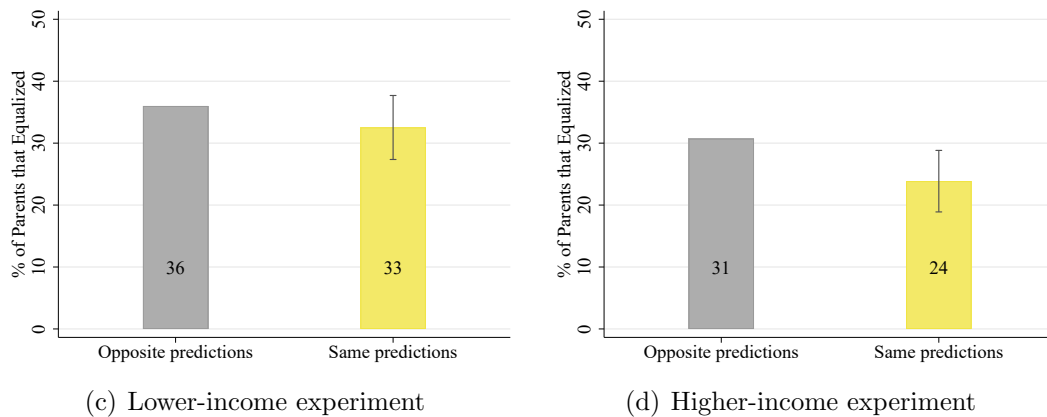
Notes: This figure presents the allocation of experimental lottery tickets across children for Scenario 5, and 95% confidence intervals, after excluding parents who allocated > 5 tickets to Child H in Scenario 1 (that is, those who may have a child-specific preference for Child H) in both experiments.

Online Appendix Figure D.3: Many Parents Equalized Opportunities Even When Returns Maximization and Equality of Outcomes Had the Same Prediction

Sample: Parents who believed tutoring yields higher test score gains for Child H ($R_L < R_H$)



Sample: Full



Notes: This figure shows the percentage of parents who equalized tickets across their children, with the left bars depicting the scenarios where equality of outcomes (EO) and returns maximization (RM) have opposite predictions and the right bars depicting the scenarios where EO and RM have the same prediction. Observations are at the parent $\times$ scenario level. Panels (a)-(b) restrict the sample to the 66% of parents in the lower-income experiment and 10% in the higher-income experiment who believed tutoring yields higher test score gains for Child H ($R_L < R_H$) and includes observations from scenarios 1-5 since the predictions for EO and RM are the same for everyone in that sample for all scenarios. Panels (c)-(d) includes all parents but only observations from scenarios 2, 3, and 5 since those are the scenarios for which predictions are the same for the full sample. The bracket on each of the right bars depicts the 95% confidence interval for a test that the difference between the bars is 0.

that it was not a factor parents were considering upfront, and thus that it does not explain why outcomes were not equalized initially.

Cross-scenario equalization does not explain the absence of outcomes equalization in the lower-income experiment. It is possible that the real stakes lottery in the lower-income experiment made parents realize that it was possible to equalize outcomes *across* scenarios instead of within. If so, this could contribute to the absence of equality of outcomes we observe within-scenario if parents were able to satisfy their desire for equality in expected outcomes by equalizing across, rather than within, scenario. To test this possibility, we asked parents if they had equalized outcomes across scenarios after we had elicited all ticket allocations in the lower-income experiment. We find that only 19% of parents said they equalized outcomes across scenarios, and our results look very similar when we exclude these respondents.

An inability to perfectly equalize outcomes does not explain the absence of outcomes equalization in the lower-income experiment. In many of our scenarios, it was not possible for parents to perfectly equalize expected outcomes. If parents only care about equalizing outcomes when they can *perfectly* do so (i.e., if their utility term governing equality of outcomes is $-\beta \mathbb{1}\{ER(x_1) \neq ER(x_2)\}$), it could bias us away from finding evidence of equality of outcomes. However, this is unlikely to explain the fact that we do not see outcomes equalization in the lower-income experiment in particular, as the percent of parent $\times$ scenario instances where parents could perfectly equalize is similarly low in the higher-income experiment (8% in the lower-income and 7% in the higher-income).

To further investigate this idea, Table D.1 presents summary statistics from Scenario 1 (which had the majority of cases in which parents could perfectly equalize outcomes), separately by whether the parent had the option to perfectly equalize experimental earnings. Although the option to equalize perfectly depends on potentially endogenous variation in parents’ beliefs about their children’s scores, we view the analysis as suggestive.

Table D.1 shows that the percentage of choices in which parents minimize outcomes inequality is not significantly different across parent types in the lower-income experiment. In the higher-income experiment, we find that there is a significant difference, however it is actually *smaller* among parents who had the option to perfectly equalize. Thus, not being able to equalize perfectly does not appear to explain our findings.

D.3 Explanations to Parents

We discuss two pieces of evidence that our explanations to parents about how to allocate their tickets in order to accomplish various goals are not responsible for the effects we see. First, we engaged in extensive qualitative piloting with parents before our lower-income experiment. We asked parents both about how they choose to divide their real-world investments between their children and about what factors, within our experimental paradigm, would affect their decisions of how to allocate the tickets between their children. Across the piloting, there were no other goals parents mentioned besides the four goals we focused on in our explanations: returns-maximization, equality of outcomes, equality of opportunity, and child-specific factors. This suggests there is not some “fifth goal” that parents would have tried to achieve had we not implemented our explanations.

To further address the concern, we bring in data from a lottery with a different set of

Online Appendix Table D.1: We Fail to Find Evidence that Parents Who Can Perfectly Equalize Outcomes Do So More Than Parents Who Cannot

	Whether Parents' Outcome-Equalizing Choice Perfectly Equalized Outcomes		
	Yes	No	P-value
	(1)	(2)	(3)
A. Lower-income experiment			
Equalized opportunities (% of parents)	0.48 (0.50)	0.39 (0.49)	0.15
Returns maximization (% of parents)	0.25 (0.44)	0.21 (0.41)	0.41
Equalized outcomes (% of parents)	0.06 (0.23)	0.11 (0.32)	0.11
Observations	104	183	
B. Higher-income experiment			
Equalized opportunities (% of parents)	0.53 (0.50)	0.48 (0.50)	0.44
Returns maximization (% of parents)	0.02 (0.14)	0.03 (0.17)	0.64
Equalized outcomes (% of parents)	0.00 (0.00)	0.05 (0.22)	0.02
Observations	102	101	

Notes: This table presents the proportion of parents who equalized opportunities, maximized returns, and attempted to equalize outcomes for Scenario 1, summarized separately in columns 1 and 2 by whether the parent had the option to perfectly equalize outcomes. The P-value reported in column 3 tests for a difference in means between columns 1 and 2. Panel A presents data from the lower-income experiment and Panel B presents data from the higher-income experiment. The table excludes 2 parents in the lower- and 82 parents in the higher-income experiment for whom the returns-maximizing and outcomes-equalizing allocations were the same.

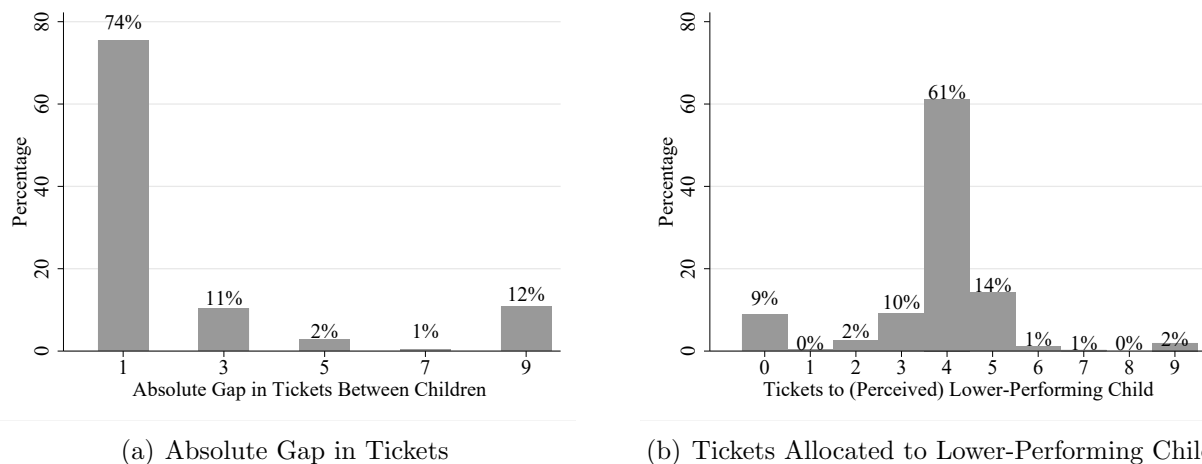
parents in Malawi who were also asked to choose how to allocate lottery tickets across two of their children. The prize was again an educational investment, in that case a scholarship to secondary school. However, a critical difference from our setting here is that the parents were given no explanations about how to allocate their tickets. This lottery was conducted in 2012 in the same area of Malawi as our lower-income experiment. Data from the lottery was previously analyzed in Dizon-Ross (2019a); however, that paper does not analyze the *inequalities* in ticket allocations across children. Rather, that paper examined which child the parent gave more lottery tickets to, as that paper was focused on a different topic (information frictions), not on understanding preferences for equality.⁶⁶

⁶⁶None of the tables or figures in Dizon-Ross (2019a) examine inequalities in the number of tickets given to each child, all instead analyzing an indicator for which child the parent gave more tickets to. The only place where Dizon-Ross (2019a) mentions inequality in tickets is in a footnote in the “Context and Experimental

Because that lottery does not have the same exogenous shocks to returns that we have here, the data from that lottery are not able to distinguish the preferences we investigate in our experiment. However, we can still use the data to provide suggestive evidence that our headline finding from this experiment – that parents have a substantial preference for equal opportunity – holds in that data as well.

Figure D.4(a) shows the absolute value of the gap in tickets between children from the other lottery. Seventy-four percent of parents chose as equal an allocation as possible, whereas only 12% chose an all-or-nothing allocation. Panel (b) shows the number of tickets that were given to the child perceived as lower-performing. Among those who chose the most equal allocation, 4 times as many chose to allocate 1 more ticket to their higher-performing child than lower-performing child, suggesting that, again, in that setting, parents were not truly indifferent or did not misunderstand the returns.⁶⁷ Rather, it is likely that they were simply averse to splitting inputs unequally.

Online Appendix Figure D.4: Many Parents Equalize Opportunities As Much As Possible In Another Setting



Notes: Data from the control group from the Dizon-Ross (2019) experiment. Panel A shows the distribution of the absolute gap between the number of tickets allocated to a parents' two children in a setting where parents were asked to allocate 9 tickets between their two children. Panel B shows the number of tickets allocated to the child the parent perceived was lower-performing child. Here, one out of every 100 households was randomly selected and the child whose name was on the selected ticket received a scholarship for four years of government school fees. In the cases where parents believed both children performed equally, we randomly select which child is designated as the "lower-performing child."

Design" section justifying why its experiment used multiple tickets even if its analyses only used a binary indicator based on those tickets, with one of the reasons being the ability to use that data in a separate paper (this paper) on inequality aversion. Specifically, footnote 15 of Dizon-Ross (2019) reads: "Although a single ticket could have also accomplished this goal [i.e., the goal of analyzing binary decisions], I used multiple tickets to increase the power to detect small shifts and to allow me to make use of this lottery in a separate paper studying inequality aversion [i.e., this paper]. As expected, most parents (74%) split their nine tickets as evenly as possible, consistent with an aversion to inequality between their children. Thus, in most cases, the analysis reduces to which child the parents give their ninth ticket to, which proxies for the child they would choose in a binary choice."

⁶⁷In that setting, survey evidence suggests that the vast majority of parents believed the earnings return to the lottery prize would be higher for higher-performing children.

D.4 Demand Effects

We now discuss several reasons that we believe that demand effects are not the primary force behind opportunity equalization in our experiment. First, our lower-income experiment uses high stakes, which is the traditional approach to address demand effects. The fact that we estimate substantial preferences for equalization even when the stakes are high suggests that demand effects are not responsible. Second, we still see substantial preferences for equality in the higher-income survey, where there were no surveyors to impress and where the pressure to please the researchers is hence arguably weaker. Finally, recent evidence suggests that, in general, demand effects are not large in these types of experiments. Mummolo and Petersen (2018) finds that demand effects are relatively minimal in hypothetical survey experiments on online platforms like mTurk or Prolific,⁶⁸ and de Quidt et al. (2018) provides evidence that demand effects are modest with both incentivized and hypothetical choices.

⁶⁸For example, they randomly assign participants information about experimenter intent and show that providing this information does not alter the treatment effects.

E The Returns to Tutoring

This section uses random variation in which child received tutoring to estimate the returns to tutoring. Specifically, conditional on parents’ ticket allocations, the assignment of tutoring to children was random. One can thus obtain an unbiased estimate of the returns to tutoring by simply comparing the scores of the children who did vs. did not receive tutoring, within samples of children who all received the same number of lottery tickets. To increase power, we use a regression to conduct this comparison, pooling across all of the subsamples in the data and then conditioning on the number of tickets received. Specifically, we estimate a regression of the following form:

$$Score_i = \alpha + \beta Tutor_{ed_i} + \tau^t + \delta' \mathbf{X}_i + \varepsilon_i \quad (11)$$

where i indexes children, $Tutor_{ed_i}$ is an indicator for whether the child received tutoring, τ^t are fixed effects for the number of lottery tickets the child received from their parent,⁶⁹ and $\mathbf{X}_i$ is a vector of baseline controls included to improve precision.⁷⁰ The coefficient of interest is β , which represents an unbiased estimate of the effect of tutoring, since tutoring assignment is random conditional on the τ^t fixed effects for the number of tickets received. We estimate equation (11) separately among Child L and Child H to examine whether the returns to tutoring vary based on the children’s performance (as perceived by parents).

Columns 1 and 2 of Table E.1 show the results of estimating equation (11) for Child L and Child H, respectively. Tutoring increases the scores among the Child L sample by 12 points on average, an effect significant at the 1 percent level. The 12 score-point effect is large: 32% of the mean among the Child L sample or 48% of the standard deviation. Given that the tutoring focused specifically on the material covered on the test, a large effect may be reasonable, although we also note that the confidence intervals are relatively wide so we cannot reject smaller positive effects. In contrast, there is no significant impact of tutoring on the scores of the Child H sample, with a coefficient that is in fact negative but small relative to the Child L effect and not statistically significant.

Columns 3-6 of Table E.1 show the robustness of the estimates to different samples of children. While columns 1 and 2 include all children, regardless of how many tickets they received, it is important to note that there was only randomized assignment of tutoring (conditional on tickets) among children who received between 1 and 9 tickets. For children who received 0 or 10 tickets, it was deterministic whether they received tutoring or not. Columns 3 and 4 show that the estimates are similar when we restrict the sample just to those children who received between 1 and 9 tickets. Columns 5 and 6 additionally restrict to the children whose parents had unequal beliefs for the scores of Child L and Child H;⁷¹ estimates remain similar.

It is interesting that we estimated a higher return to tutoring for Child L than Child

⁶⁹Specifically, we include fixed effects for the number of lottery tickets received on the scenario that was randomly selected, for that family, to be implemented. Average estimated returns to tutoring are similar if instead we include fixed effects for the number of lottery tickets the child received in every scenario.

⁷⁰Specifically, we include the parents’ baseline beliefs about the child’s test scores without tutoring and school fixed effects.

⁷¹Recall that among these households, the selection of which child was Child “L” or “H” does not have substantive meaning.

H (p -value < 0.05 for the column 1/2 and 3/4 specifications), while parents expected that the tutoring would have a higher return for Child H. Since parents had limited exposure to the tutoring, it is not surprising that they would not have fully accurate beliefs. That said, were their beliefs completely inaccurate? Columns 7 and 8 of Table E.1 shed some light on this issue by estimating the heterogeneity in the returns based on whether parents had a below-median prediction of the returns to tutoring. The results show that the returns to tutoring are roughly 4 score points more negative for children whose parents thought they would have below-median returns for both Child L and H (see the negative interaction term for *Tutored* $\times$ *BelowMed. Prediction* in columns 7 and 8), although the evidence is just suggestive, as the heterogeneity is not statistically significant.

Online Appendix Table E.1: Tutoring Increases Scores for Child L

	Dependent Variable: Child Score							
	(1) Child L	(2) Child H	(3) Child L	(4) Child H	(5) Child L	(6) Child H	(7) Child L	(8) Child H
Tutored	12.2*** [4.24]	-3.92 [4.47]	10.6** [4.75]	-5.54 [4.99]	11.4** [4.66]	-2.64 [4.86]	14.4** [6.55]	-2.74 [7.39]
Tutored $\times$ Below Med. Prediction							-4.18 [9.22]	-4.11 [10.6]
<i>p</i> -value: Child L Tutored = Child H Tutored	0.010		0.023		0.044			
Incl. 10-0 Selection Parents	Yes	Yes	No	No	Yes	Yes	Yes	Yes
Incl. Equal Belief Parents	Yes	Yes	Yes	Yes	No	No	No	No
# Observations	289	289	155	155	260	260	260	260
# Households	289	289	155	155	260	260	260	260
Dep Var Mean (Tutored = 0)	38	46	38	49	39	46	39	46
Dep Var SD (Tutored=0)	25	25	26	27	25	25	25	25

Notes: This table shows the effects of tutoring on children's test scores and their heterogeneity in by parents' belief about tutoring returns in various subsamples. "Below Med. Prediction" is a dummy for whether the parent's prediction of the returns to tutoring is below the median prediction among parents. The effects are estimated separately among Child L or among Child H. Columns 1-2 include parents who gave the same score prediction for both children and who had a 10-0 selection in the chosen scenario, columns 3-4 exclude parents who had a 10-0 selection, while columns 5-8 exclude parents who had equal belief about their two children's score without tutoring. All regressions include fixed effects for the number of tickets the child received from their parent under the chosen scenario, the parent's prediction of the score without tutoring, and school FE as controls. Columns 7 and 8 regressions also include all control variable interactions with Below Med. Prediction, as well as the main effect of Below Med. Prediction

F Estimation of the Mixed Logit

F.1 Identification assumptions

We assume that each preference parameter $(\lambda, \alpha, \beta, \gamma)$ is distributed normally across individuals with a standard deviation estimated using the regression model. We also allow for correlations across all preference parameters and again estimate the correlations within the regression procedure. Finally, the error term ε_{ijk} is assumed to be Type I extreme value, independent across i, j , and k .⁷²

F.2 Control Function Approach

This section describes how we use the control function approach of Petrin and Train (2010) to correct for potential endogeneity in our mixed logit estimation of equation (4).

The two potentially endogenous regressors are *HouseholdEarnings_{ijk}* and *OutcomeInequality_{ijk}*. To isolate the experimental variation in these regressors, we use indicators for the experimental scenario $\times$ ticket allocation τ_{jk} as instruments, thus eliminating the endogenous component of the variation. In the first stage of the estimation, we estimate two regressions, regressing the dependent variables *HouseholdEarnings_{ijk}* and *OutcomeInequality_{ijk}* on our exogenous instruments (indicators for the scenario $\times$ ticket allocation, τ_{jk}) and on the other endogenous regressors from equation (4). We denote $\hat{\eta}_{ijk}$ and $\hat{\mu}_{ijk}$ as the residuals from those regressions. In the second stage, we then include these residuals linearly in the utility function, allowing them to enter with normally-distributed random coefficients ρ_i and τ_i :

$$u_{ijk} = \lambda_i \text{HouseholdEarnings}_{ijk} - \alpha_i \text{OpportunityInequality}_{ijk} - \beta_i \text{OutcomeInequality}_{ijk} + \gamma_i \text{TicketsToChildL}_{ijk} + \rho_i \hat{\eta}_{ijk} + \tau_i \hat{\mu}_{ijk} + \varepsilon'_{ijk} \quad (12)$$

Intuitively, this approach leverages the fact that, conditional on the linear control function $\rho_i \hat{\eta}_{ijk} + \tau_i \hat{\mu}_{ijk}$ (which captures all of the potentially-endogenous components of *HouseholdEarnings_{ijk}* and *OutcomeInequality_{ijk}*), *HouseholdEarnings_{ijk}* and *OutcomeInequality_{ijk}* should no longer be correlated with the unobserved component of the decision ε'_{ijk} .

⁷²Allowing each choice to have a separate logit error may seem strange here given that there is a relatively natural numeric ordering between the allocations. However, we are accounting for the numeric ordering through our individual-level random coefficient on *TicketsToChildL_{ijk}*, which allows for each parent to have an unexplained taste for allocations that give more tickets to one child than the other.

G Selected scripts from experiments and surveys

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Survey CTO Script for Lower-income Experiment

Notes:

Text in black was read aloud by surveyors to parents, including both scripts and survey questions.

Text in green shows the answer options for the survey questions.

Text in purple is instructions to the surveyor.

Text in red shows skip patterns.

Text in blue is notes to the reader.

Note that the order the scenarios are discussed in the paper does not correspond to the numbering of cards in the following script. Card 1 is the Base Case; Card 2 is Lump Sum to Child L; Card 3 is Higher Returns to Child H; Card 4 is Higher Returns to Child L & Lump Sum to Child H; Card 5 is Higher Returns to Child L.

Anything formatted as $\{ \$ \}$ is a value that was prefilled by the CTO from either a pre-fill file, calculations in CTO, or a parent's responses to earlier survey questions.

Question Name	Survey CTO Script
demo1	In this experiment today, we are going to ask you several questions involving lottery tickets. In all of these scenarios, we will give you 10 lottery tickets and ask you how to split them between two things [Show demo lottery tickets.] Before we go through today's experiment, we want to give you a hypothetical demo for how this would work. So, imagine a hypothetical scenario where we present you with 10 lottery tickets. One of them will be selected randomly as the winning ticket [put your hand over your eyes and gesture as though picking one lottery ticket randomly] and whatever is specified on that ticket will happen. In this example, regardless of which ticket is chosen, the prize for winning would be cash paid to you, and you would choose for each ticket whether the prize delivered if that ticket is chosen is a smaller or larger amount of money, that is, 50 MWK or 100 MWK.
	Experiment demo
demo2	If you choose 50 MWK for each ticket, you would be guaranteed to receive 50 MWK with certainty, because every ticket would say 50 MWK on it, so whichever ticket was chosen would also say 50 MWK [mime picking a ticket]. On the other hand, if you choose 100 MWK for each ticket you would be guaranteed to receive 100 MWK with certainty because every ticket would say 100 MWK. If you split your tickets, there is some chance that you would only win 50 MWK. Thus, if you definitely want a higher amount of money (which most people do!) you would just assign all tickets to 100 MWK. If you want some chance at a lower amount of money then you would allocate some tickets to 50 MWK, with your chances of winning 50 MWK instead of 100 MWK increasing as the number of tickets you pick to carry a prize of 50 MWK increases. How would you want to allocate these 10 lottery tickets?
demo_50mk	50 MWK ___ ___ (out of 10 tickets)
demo_100mk	100 MWK ___ ___ (out of 10 tickets)
	Re-do experiment demo

demo3	[If parent did not allocate all tickets to 100 MWK in demo_100mk] ENUMERATOR: The parent chose a smaller amount, 50 MWK, for one or more tickets, first, ask why, then explain that there is no reason for the parent to choose 50 MWK as the prize for any lottery ticket, adjusting your explanation to match their reason. Now, let's try that question one more time. How would you want to allocate these 10 lottery tickets?
demo_redo_50mk	50 MWK __ __ (out of 10 tickets)
demo_redo_100mk	100 MWK __ __ (out of 10 tickets)
	Re-re-do experiment demo
demo4	[If parent did not allocate all tickets to 100 MWK in demo_redo_100mk] ENUMERATOR: The ticket amount total does not equal 10, please review with respondent and ask again: Let's try that question one last time. How would you allocate these 10 lottery tickets?
demo_redo2_50mk	50 MWK __ __ (out of 10 tickets)
demo_redo2_100mk	100 MWK __ __ (out of 10 tickets)
	Introduction
intronote	Today, both your children will be taking a test. It's the same test we described in our previous interview with you – a 30-minute exam on math. The test will be multiple choice questions that are drawn from the curricula that your children covered last year in school. So, your child's expected score should be similar to tests that were administered in their schools last year. Both your children will receive a reward based on how well they do on the test – the better each child does, the higher the value of the reward that child will receive.
intronote1	However, your children's scores are not the only thing that will determine their rewards -- their scores will also depend on a lottery we will perform. We will explain the lottery in more detail, but it will determine the relationship between scores and rewards. So, depending on how the lottery goes, your children could get a high reward for their score, or a lower reward for their score. So, as you can see, there is some chance/luck involved in the process. This means it won't make sense to compare yourself or your children with other families, because they could have gotten more or less lucky than you in the lottery.
intronote2	One of your children will receive tutoring today, based on your choices in today's experiment. The goal of the tutoring is to help the child do better on today's test so that they can get a higher reward after. The tutoring class would review material similar to what will be covered on the test. It is designed particularly to help your child do better on this specific test. So, the tutor will only go through material that will be covered on today's test. It is likely that the child who receives an hour of tutoring will perform better on this test [show the test] than if he/she did not receive tutoring. And the higher the score a child gets on the test, the higher his/her expected reward. Each child can earn up to 10500 MWK. After the test, each child will be delivered his or her reward in the form of cash delivered directly to him or her; we will present each child directly with her or her individual reward, along with a certificate certifying the amount of cash earned, and will tell him or her that the cash is his or hers directly to keep and spend as they choose. So for example, if one of your children receives a reward of 10500 MWK

	and the other receives a reward of 1000 MWK, they will each be presented with those amounts at the end of the test along with a certificate saying how much they earned and telling them that they can spend the cash as they choose.
intronote3	In order to decide which one of your children will receive tutoring , we'll ask you to allocate 10 lottery tickets across your children. One out of the 10 lottery tickets will be randomly selected, and the child whose ticket is selected will receive one hour of tutoring. If that chosen lottery ticket belongs to "\${childA}", he/she will receive tutoring, otherwise, "\${childB}" will receive tutoring. Thus, the child with a larger allocation of lottery tickets has a higher chance of receiving tutoring.
	Description of how the tutoring is assigned
intronote4	So, here's how the lottery tickets for tutoring work. Here are 10 sample tickets. We'll ask you to choose how you want to allocate your 10 lottery tickets across your children by checking "\${childA}" on each ticket or "\${childB}" on each ticket. One out of the 10 lottery tickets will be randomly selected [put your hand over your eyes and gesture as though picking one lottery ticket randomly], and the child whose ticket it is will receive one hour of tutoring. If that chosen lottery ticket belongs to "\${childA}", he/she will receive tutoring, otherwise, "\${childB}" will receive tutoring. Thus, the child with a larger allocation of lottery tickets has a higher chance of receiving tutoring. You can choose which child receives the tutoring by simply giving all lottery tickets to that child and then we are guaranteed to give that child the tutoring. Alternatively, you may give some tickets to each child in order to give them both a chance to win. Any of these decisions is totally fine – it is up to you – and we will not tell your children what you chose or tell them that you had any influence over whether they did or did not receive tutoring . Do you have any questions before I start? [Pause to answer questions]
intronote5	Before we begin with the actual experiment, I would like to explain to you how the value of prizes that each child receives might depend on their test score. I will go through a few examples, and then explain to you how we will choose which example to use. First let me remind you that you thought that \${childA} would score \${childA_without} on the math test without tutoring and \${childA_with} with tutoring. You thought \${childB} would score \${childB_without} on the math test without tutoring and \${childB_with} with tutoring. So, \${high_gain} has a higher score gain from tutoring. <i>[fill in reference table on paper with scores for \${childA} and \${childB}. Place a check for \${childB} in the "higher scoring" column and place a check for \${high_gain} in the "higher gains from tutoring" column].</i> An example of the visual aid template that surveyors filled out is provided on page 39 (Figure 2a), along with what a completed template may have looked like (Figure 2b). We will be using this table as a reference as we proceed.
	Practice Scenario A
pracA_enum	ENUMERATOR PREP: Fill out the paper version of this visual aid based on the below table, which is based on the respondent's beliefs

	An example of the visual aid that would have appeared to surveyors in the CTO (Figure 1a) is available on page 39. Also provided on page 39 is the template provided to surveyors (Figure 1b) and an example of what a completed template may have looked like (Figure 1c).
pracA	In this practice card, $\{childA\}$ receives 10 MWK per point s/he scores above $\{cutoff\}$. $\{childB\}$ scores 50 MWK per point s/he scores above $\{cutoff\}$.
cardA	Without tutoring, you expected $\{childA\}$ to score $\{childA\_without\}$ on the test. Now remember that $\{childA\}$ gets 10 MWK for every point over $\{cutoff\}$. So, if $\{childA\}$ does in fact score $\{childA\_without\}$, that means that $\{childA\}$ would get a prize worth $\{childA\_wo\_cutoff\}$ points X 10 MWK per point = $\{childA\_pA\_wo\}$ MWK. With tutoring, you expected $\{childA\}$ to get a score of $\{childA\_with\}$. If $\{childA\}$ does in fact score $\{childA\_with\}$ without tutoring, he/she will receive a prize worth $\{childA\_w\_cutoff\}$ points X 10 MWK per point = $\{childA\_pA\_w\}$ MWK. So, then the more tickets you give to $\{childA\}$, the higher chance they get tutoring and get a higher reward. Similarly, without tutoring, you expected $\{childB\}$ to score $\{childB\_without\}$ on the test. Remember that $\{childB\}$ gets 50 MWK for every point over $\{cutoff\}$. If he/she does score $\{childB\_without\}$, she would get a prize worth $\{childB\_wo\_cutoff\}$ X 50 MK = $\{childB\_pA\_wo\}$ MWK. With tutoring, you expected $\{childB\}$ to get a score of $\{childB\_with\}$, in which case he/she will receive a prize worth $\{childB\_w\_cutoff\}$ X 50 MK = $\{childB\_pA\_w\}$ MWK. So, then the more tickets you give to $\{childB\}$, the higher chance they get tutoring and get a higher reward.
	PRACTICE CARD A: (10 MWK per point above $\{cutoff\}$ for $\{childA\}$, 50 MKW per point above $\{cutoff\}$ for $\{childB\}$)
graphA	An example of the bar chart template that surveyors used (Figure 3a) is provided on page 40. Also on page 40 is an example of what a complete graph may have looked like for this scenario (Figure 3b). This bar chart is another way to see the information in the table. It shows how expected reward for $\{childA\}$ and $\{childB\}$ and total rewards depend on how you allocated tickets. <i>Draw a graph with y axis labeled rewards and x axis with space for 11 bars. Below the x-axis, create a row labeled “Tickets to $\{childA\}$” and write the numbers 0-10 from left to right. Under this, create a row labeled “Tickets to $\{childB\}$” and write the numbers 10-0 from left to right.</i> <i>Note that after initial piloting, we added a graph template to reduce the time it took to draw the graph. As stated above, the template is shown on page 40. Prior to the template, surveyors were given graph paper on which to draw the graph. The text in the survey reflects the original instructions pre-template.</i> With this card, if you allocate 0 tickets to $\{childA\}$ and 10 tickets to $\{childB\}$, $\{childA\}$’s expected reward is $\{childA\_ca\_0\}$ and $\{childB\}$’s expected reward is $\{childB\_ca\_10\}$. The total reward for this allocation is $\{total\_ca0\}$. <i>Draw a bar for $\{childA\}$ from $y=0$ to $y=\{childA\_ca\_0\}$ and shade this in lightly. Label this region $\{childA\_ca\_0\}$. Draw a bar</i>

	for $\{childB\}$ that starts from $y=\{childA\_ca\_0\}$ to $y=\{total\_ca0\}$ and do not shade in. Label this region $\{childB\_ca\_10\}$. Label top of bar $\{total\_ca0\}$. If you allocate 1 ticket to $\{childA\}$ and 9 tickets to $\{childB\}$, $\{childA\}$'s expected reward is $\{childA\_ca\_1\}$ and $\{childB\}$'s expected reward is $\{childB\_ca\_9\}$. The total reward for this allocation is $\{total\_ca1\}$. Draw a bar for $\{childA\}$ from $y=0$ to $y=\{childA\_ca\_1\}$ and shade this in lightly. Label this region $\{childA\_ca\_1\}$. Draw a bar for $\{childB\}$ that starts from $y=\{childA\_ca\_1\}$ to $y=\{total\_ca1\}$ and do not shade in. Label this region $\{childB\_ca\_9\}$. Label top of bar $\{total\_ca1\}$. If you allocate 2 tickets to $\{childA\}$ and 8 tickets to $\{childB\}$, $\{childA\}$'s expected reward is $\{childA\_ca\_2\}$ and $\{childB\}$'s expected reward is $\{childB\_ca\_8\}$. The total reward for this allocation is $\{total\_ca2\}$. Draw a bar for $\{childA\}$ from $y=0$ to $y=\{childA\_ca\_2\}$ and shade this in lightly. Label this region $\{childA\_ca\_2\}$. Draw a bar for $\{childB\}$ that starts from $y=\{childA\_ca\_2\}$ to $y=\{total\_ca2\}$ and do not shade in. Label this region $\{childB\_ca\_8\}$. Label top of bar $\{total\_ca2\}$. If you allocate 3 tickets to $\{childA\}$ and 7 tickets to $\{childB\}$, $\{childA\}$'s expected reward is $\{childA\_ca\_3\}$ and $\{childB\}$'s expected reward is $\{childB\_ca\_7\}$. The total reward for this allocation is $\{total\_ca3\}$. Draw a bar for $\{childA\}$ from $y=0$ to $y=\{childA\_ca\_3\}$ and shade this in lightly. Label this region $\{childA\_ca\_3\}$. Draw a bar for $\{childB\}$ that starts from $y=\{childA\_ca\_3\}$ to $y=\{total\_ca3\}$ and do not shade in. Label this region $\{childB\_ca\_7\}$. Label top of bar $\{total\_ca3\}$. If you allocate 4 tickets to $\{childA\}$ and 6 tickets to $\{childB\}$, $\{childA\}$'s expected reward is $\{childA\_ca\_4\}$ and $\{childB\}$'s expected reward is $\{childB\_ca\_6\}$. The total reward for this allocation is $\{total\_ca4\}$. Draw a bar for $\{childA\}$ from $y=0$ to $y=\{childA\_ca\_4\}$ and shade this in lightly. Label this region $\{childA\_ca\_4\}$. Draw a bar for $\{childB\}$ that starts from $y=\{childA\_ca\_4\}$ to $y=\{total\_ca4\}$ and do not shade in. Label this region $\{childB\_ca\_6\}$. Label top of bar $\{total\_ca4\}$.
graphA2	If you allocate 5 tickets to $\{childA\}$ and 5 tickets to $\{childB\}$, $\{childA\}$'s expected reward is $\{childA\_ca\_5\}$ and $\{childB\}$'s expected reward is $\{childB\_ca\_5\}$. The total reward for this allocation is $\{total\_ca5\}$. Draw a bar for $\{childA\}$ from $y=0$ to $y=\{childA\_ca\_5\}$ and shade this in lightly. Label this region $\{childA\_ca\_5\}$. Draw a bar for $\{childB\}$ that starts from $y=\{childA\_ca\_5\}$ to $y=\{total\_ca5\}$ and do not shade in. Label this region $\{childB\_ca\_5\}$. Label top of bar $\{total\_ca5\}$. If you allocate 6 tickets to $\{childA\}$ and 4 tickets to $\{childB\}$, $\{childA\}$'s expected reward is $\{childA\_ca\_6\}$ and $\{childB\}$'s expected reward is $\{childB\_ca\_4\}$. The total reward for this allocation is $\{total\_ca6\}$. Draw a bar for $\{childA\}$ from $y=0$ to $y=\{childA\_ca\_6\}$ and shade this in lightly. Label this region $\{childA\_ca\_6\}$. Draw a bar for $\{childB\}$ that starts from $y=\{childA\_ca\_6\}$ to $y=\{total\_ca6\}$ and do not shade in. Label this region $\{childB\_ca\_4\}$. Label top of bar $\{total\_ca6\}$. If you allocate 7 tickets to $\{childA\}$ and 3 tickets to $\{childB\}$, $\{childA\}$'s expected reward is $\{childA\_ca\_7\}$ and $\{childB\}$'s expected reward is $\{childB\_ca\_3\}$. The total reward for this allocation is $\{total\_ca7\}$. Draw a bar for $\{childA\}$ from $y=0$ to $y=\{childA\_ca\_7\}$ and shade this in lightly. Label this region $\{childA\_ca\_7\}$. Draw a bar

	for $\{childB\}$ that starts from $y=\{childA\_ca\_7\}$ to $y=\{total\_ca7\}$ and do not shade in. Label this region $\{childB\_ca\_3\}$. Label top of bar $\{total\_ca7\}$. If you allocate 8 tickets to $\{childA\}$ and 2 tickets to $\{childB\}$, $\{childA\}$'s expected reward is $\{childA\_ca\_8\}$ and $\{childB\}$'s expected reward is $\{childB\_ca\_2\}$. The total reward for this allocation is $\{total\_ca8\}$. Draw a bar for $\{childA\}$ from $y=0$ to $y=\{childA\_ca\_8\}$ and shade this in lightly. Label this region $\{childA\_ca\_8\}$. Draw a bar for $\{childB\}$ that starts from $y=\{childA\_ca\_8\}$ to $y=\{total\_ca8\}$ and do not shade in. Label this region $\{childB\_ca\_2\}$. Label top of bar $\{total\_ca8\}$. If you allocate 9 tickets to $\{childA\}$ and 1 ticket to $\{childB\}$, $\{childA\}$'s expected reward is $\{childA\_ca\_9\}$ and $\{childB\}$'s expected reward is $\{childB\_ca\_1\}$. The total reward for this allocation is $\{total\_ca9\}$. Draw a bar for $\{childA\}$ from $y=0$ to $y=\{childA\_ca\_9\}$ and shade this in lightly. Label this region $\{childA\_ca\_9\}$. Draw a bar for $\{childB\}$ that starts from $y=\{childA\_ca\_9\}$ to $y=\{total\_ca9\}$ and do not shade in. Label this region $\{childB\_ca\_1\}$. Label top of bar $\{total\_ca9\}$. If you allocate 10 tickets to $\{childA\}$ and 0 tickets to $\{childB\}$, $\{childA\}$'s expected reward is $\{childA\_ca\_10\}$ and $\{childB\}$'s expected reward is $\{childB\_ca\_0\}$. The total reward for this allocation is $\{total\_ca10\}$. Draw a bar for $\{childA\}$ from $y=0$ to $y=\{childA\_ca\_10\}$ and shade this in lightly. Label this region $\{childA\_ca\_10\}$. Draw a bar for $\{childB\}$ that starts from $y=\{childA\_ca\_10\}$ to $y=\{total\_ca10\}$ and do not shade in. Label this region $\{childB\_ca\_0\}$. Label top of bar $\{total\_ca10\}$.
cardA2	For instance, if $\{childA\}$ is allocated 0 tickets and $\{childB\}$ is allocated 10 tickets, expected reward for $\{childA\}$ is $\{childA\_ca\_0\}$, while expected reward for $\{childB\}$ is $\{childB\_ca\_10\}$. If $\{childA\}$ is allocated 10 tickets and $\{childB\}$ is allocated 0 tickets, expected reward for $\{childA\}$ is $\{childA\_ca\_10\}$, while expected reward for $\{childB\}$ is $\{childB\_ca\_0\}$. A different way to see this would be to look at the following table [point to paper version of table below]. This column [point to leftmost column] shows how many tickets you would be allocating to $\{childA\}$, the next column shows $\{childA\}$'s expected reward if you gave that many tickets to her, and this column [point to fourth column from left] shows $\{childB\}$'s expected reward in that case. The more tickets you allocate to $\{childA\}$, the higher the chance $\{childA\}$ gets tutoring relative to $\{childB\}$, and so the higher $\{childA\}$'s expected reward, and the lower $\{childB\}$'s reward. [point to different ticket and reward amounts in the columns]. So basically, on the table you can think of picking a ticket allocation as the same as picking a column. You can also add up the rewards for both kids to get the total. If you do that you'll notice that the total reward amount is highest when all tickets are allocated to $\{childB\}$ because that guarantees that $\{childB\}$ gets the tutoring [point to first row of table]. The reason that, on this card, guaranteeing that $\{childB\}$ gets the tutoring maximizes the total reward is that $\{childB\}$ is getting more MWK per point ($\{childA\_without\}$ as opposed to 10) and so $\{childB\}$'s reward increases more with the tutoring than $\{childA\}$'s. You will also notice that giving all tickets to $\{childB\}$ yields the largest gap between the expected

	rewards of $\{childA\}$ and $\{childB\}$. This is all specific to this card example; that might be different on different cards.	
cardA3	So to summarize: [Continue explaining using the paper table you drew] If you want to give the tutoring to $\{childA\}$, you should allocate all tickets to $\{childA\}$ [draw arrow to bottom row of table in which $\{childA\}$ gets 10 tickets and label this "highest reward to $\{childA\}$"]. If you want to give the tutoring to $\{childB\}$, you should allocate all tickets to $\{childB\}$ [draw arrow to the top row of table in which $\{childB\}$ gets 10 tickets and label this "highest reward to $\{childB\}$"]. As discussed before, if you would like to maximize the total reward amount received by $\{childA\}$ and $\{childB\}$ combined, you would give all the tickets to $\{childB\}$ [draw arrow to top row of table in which $\{childB\}$ gets 10 tickets and label this "highest total reward"] because their reward will increase more with the tutoring.	
cardA4	[If the maximum expected earnings of child A are greater than or equal to the minimum expected earnings of child B] If you would like to give both children as close to the same expected reward as possible, you would allocate the tickets such that the expected rewards are the same, which means to give more tickets to $\{childA\}$ than $\{childB\}$ [draw an arrow to the rows of table in which $\{childA\}$ gets more tickets than $\{childB\}$ and label "most equal reward"].	[If the maximum expected earnings of child A are less than the minimum expected earnings of child B.] If you would like to give both children as close to the same expected reward as possible, you would allocate the tickets such that the expected rewards are the same, which means to give 10 tickets to $\{childA\}$ and 0 tickets to $\{childB\}$ [draw an arrow to the bottom rows of table in which $\{childA\}$ gets 10 tickets and label "most equal reward"].
cardA4_3	If you would like to give both children an equal opportunity to receive tutoring, you would allocate tickets equally: 5 tickets to $\{childA\}$ and 5 tickets to $\{childB\}$ [draw an arrow to the row in table in which $\{childA\}$ and $\{childB\}$ each get 5 tickets and label "equal tickets"].	
	Verify Understanding	
cardA5	Do you have any questions? Now to make sure I explained things well, let me ask you a few questions. The goal is just to help you understand – don't worry if you get any wrong. How would you allocate your tickets IF:	
cardA_q1	1. You would like to definitely give the tutoring to $\{childA\}$? For the first week of the survey, respondents were shown the following four answer options: • Give all my tickets to $\{childA\}$ • Give all my tickets to $\{childB\}$ • Give half my tickets to $\{childA\}$ and half to $\{childB\}$ • Allocate based on the graph (so expected rewards are the same) After a week, the answer options were changed so that parents could pick any number of tickets for each child (as in cardA_q1_A and cardA_q1_B below). 63 parents answered using the updated format; the remainder saw the original four answer options.	

cardA_q1_A	Tickets to \${childA}
cardA_q1_B	Tickets to \${childB}
cardA_q2	2. You would like to definitely give the tutoring to \${childB}? For the first week of the survey, respondents were shown the following four answer options: • Give all my tickets to \${childA} • Give all my tickets to \${childB} • Give half my tickets to \${childA} and half to \${childB} • Allocate based on the graph (so expected rewards are the same) After a week, the answer options were changed so that parents could pick any number of tickets for each child (as in cardA_q2_A and cardA_q2_B below). 63 parents answered using the updated format; the remainder saw the original four answer options.
cardA_q2_A	Tickets to \${childA}
cardA_q2_B	Tickets to \${childB}
cardA_q3	3. You would like to maximize the total reward across both children? For the first week of the survey, respondents were shown the following four answer options: • Give all my tickets to \${childA} • Give all my tickets to \${childB} • Give half my tickets to \${childA} and half to \${childB} • Allocate based on the graph (so expected rewards are the same) After a week, the answer options were changed so that parents could pick any number of tickets for each child (as in cardA_q3_A and cardA_q3_B below). 63 parents answered using the updated format; the remainder saw the original four answer options.
cardA_q3_A	Tickets to \${childA}
cardA_q3_B	Tickets to \${childB}
cardA_q4	4. You would like to give both children an equal opportunity to receive tutoring? For the first week of the survey, respondents were shown the following four answer options: • Give all my tickets to \${childA} • Give all my tickets to \${childB} • Give half my tickets to \${childA} and half to \${childB} • Allocate based on the graph (so expected rewards are the same) After a week, the answer options were changed so that parents could pick any number of tickets for each child (as in cardA_q4_A and cardA_q4_B below). 63 parents answered using the updated format; the remainder saw the original four answer options.
cardA_q4_A	Tickets to \${childA}
cardA_q4_B	Tickets to \${childB}
cardA_q5	5. You would like to give both children as close to the same reward as possible?

	For the first week of the survey, respondents were shown the following four answer options: • Give all my tickets to \${childA} • Give all my tickets to \${childB} • Give half my tickets to \${childA} and half to \${childB} • Allocate based on the graph (so expected rewards are the same) After a week, the answer options were changed so that parents could pick any number of tickets for each child (as in cardA_q5_A and cardA_q5_B below). 63 parents answered using the updated format; the remainder saw the original four answer options.
cardA_q5_A	Tickets to \${childA}
cardA_q5_B	Tickets to \${childB}
cardA_q1_wrong	[If child A was not allocated all 10 tickets in cardA_q1] The respondent answered this question wrong. Review with the respondent and ask the question again: <i>Let's try question 1 again. How would you allocate tickets if:</i> <i>1. You would like to definitely give the tutoring to \${childA}?</i> For the first week of the survey, respondents were shown the following four answer options: • Give all my tickets to \${childA} • Give all my tickets to \${childB} • Give half my tickets to \${childA} and half to \${childB} • Allocate based on the graph (so expected rewards are the same) After a week, the answer options were changed so that parents could pick any number of tickets for each child (as in cardA_q1_wrong_A and cardA_q1_wrong_B below).
cardA_q1_wrong_A	Tickets to \${childA} [If child A is not allocated all 10 tickets] Respondent answered incorrectly. Review with respondent and ask question again, until s/he gets the right answer
cardA_q1_wrong_B	Tickets to \${childB} [If child B is allocated any tickets] Respondent answered incorrectly. Review with respondent and ask question again, until s/he gets the right answer
cardA_q2_wrong	[If child B was not allocated all 10 tickets in cardA_q2] The respondent answered this question wrong. Review with the respondent and ask the question again: <i>Let's try question 2 again. How would you allocate tickets if:</i> <i>2. You would like to definitely give the tutoring to \${childB}?</i> For the first week of the survey, respondents were shown the following four answer options: • Give all my tickets to \${childA} • Give all my tickets to \${childB}

	- Give half my tickets to \${childA} and half to \${childB} - Allocate based on the graph (so expected rewards are the same) After a week, the answer options were changed so that parents could pick any number of tickets for each child (as in cardA_q2_wrong_A and cardA_q2_wrong_B below).
cardA_q2_wrong_A	Tickets to \${childA} [If child A is allocated any tickets] Respondent answered incorrectly. Review with respondent and ask question again, until s/he gets the right answer
cardA_q2_wrong_B	Tickets to \${childB} [If child B is not allocated all 10 tickets] Respondent answered incorrectly. Review with respondent and ask question again, until s/he gets the right answer
cardA_q3_wrong	[If child B was not allocated all 10 tickets in cardA_q3] The respondent answered this question wrong. Review with the respondent and ask the question again: <i>Let's try question 3 again. How would you allocate tickets if:</i> <i>3. You would like to maximize the total reward across both children?</i> For the first week of the survey, respondents were shown the following four answer options: - Give all my tickets to \${childA} - Give all my tickets to \${childB} - Give half my tickets to \${childA} and half to \${childB} - Allocate based on the graph (so expected rewards are the same) After a week, the answer options were changed so that parents could pick any number of tickets for each child (as in cardA_q3_wrong_A and cardA_q3_wrong_B below).
cardA_q3_wrong_A	Tickets to \${childA} [If child A is allocated any tickets] Respondent answered incorrectly. Review with respondent and ask question again, until s/he gets the right answer
cardA_q3_wrong_B	Tickets to \${childB} [If child B is not allocated all 10 tickets] Respondent answered incorrectly. Review with respondent and ask question again, until s/he gets the right answer
cardA_q4_wrong	[If child A and child B were not both allocated 5 tickets in cardA_q4] The respondent answered this question wrong. Review with the respondent and ask the question again: <i>Let's try question 4 again. How would you allocate tickets if:</i> <i>4. You would like to give both children an equal opportunity to receive tutoring?</i> For the first week of the survey, respondents were shown the following four answer options: Give all my tickets to \${childA}

	• Give all my tickets to \${childB} • Give half my tickets to \${childA} and half to \${childB} • Allocate based on the graph (so expected rewards are the same) After a week, the answer options were changed so that parents could pick any number of tickets for each child (as in cardA_q4_wrong_A and cardA_q4_wrong_B below).
cardA_q4_wrong_A	Tickets to \${childA} [If child A was not allocated 5 tickets] Respondent answered incorrectly. Review with respondent and ask question again, until s/he gets the right answer
cardA_q4_wrong_B	Tickets to \${childB} [If child B was not allocated 5 tickets] Respondent answered incorrectly. Review with respondent and ask question again, until s/he gets the right answer
cardA_q5_wrong	[If CTO calculates answer is wrong in cardA_q5] The respondent answered this question wrong. Review with the respondent and ask the question again: <i>Let's try question 5 again. How would you allocate tickets if:</i> <i>5. You would like to give both children as close to the same reward as possible?</i> For the first week of the survey, respondents were shown the following four answer options: • Give all my tickets to \${childA} • Give all my tickets to \${childB} • Give half my tickets to \${childA} and half to \${childB} • Allocate based on the graph (so expected rewards are the same) After a week, the answer options were changed so that parents could pick any number of tickets for each child (as in cardA_q5_wrong_A and cardA_q5_wrong_B below).
cardA_q5_wrong_A	Tickets to \${childA} [If CTO calculates answer is wrong] Respondent answered incorrectly. Review with respondent and ask question again, until s/he gets the right answer
cardA_q5_wrong_B	Tickets to \${childB} [If CTO calculates answer is wrong] Respondent answered incorrectly. Review with respondent and ask question again, until s/he gets the right answer
cardA_childA	Which do you think you would have done if this was the real card? Tickets to \${childA}?
cardA_childB	Tickets to \${childB}?
cardA_fail	[If the sum of the tickets does not equal 10] The number of tickets does NOT equal 10. Go back and correct.

	Why would you allocate $\\$ \{cardA_childA\}$ tickets to $\\$ \{childA\}$, and $\\$ \{cardA_childB\}$ tickets to $\\$ \{childB\}$? [make sure that the parents' explanation is consistent with their allocation]. ENUMERATOR : [DO NOT PROMPT. Select one/more responses based on parent's answer. Make sure parent's explanation is consistent with allocation. If not, find out what the parent wants to do and go back and adjust their ticket allocation as appropriate] Options 1. Prefer $\\$ \{childA\}$ to get tutoring 2. Prefer $\\$ \{childB\}$ to get tutoring 3. Want to equalize inputs (give both children an opportunity to get tutoring) 4. Want to equalize outcomes (i.e. equalize expected rewards) 5. Want to maximize returns (i.e. maximize total expected rewards) 6. Other For the first 4 days of the survey, surveyors were only asked to mark if the respondent understood (i.e. that their explanation was consistent with their allocation) as an answer to this question. For the 172 parents who answered on or after day 5, surveyors were shown the instructions and answer options listed above.
cardA_check	
cardA_other	Other reason:
	Practice Scenario B
enum_pracB	ENUMERATOR PREP: Fill out the paper version of this visual aid based on the below table, which is based on the respondent's beliefs
practicecardB_dis	Let's walk through the second example card. [Show Practice Card B Visual Aid]. This one is really similar, except now things are flipped, so now it is $\$ \{childB\}$ who gets 10 MWK for every point over a score of $\$ \{cutoff\}$ and $\$ \{childA\}$ who gets 50 MWK for every point over $\$ \{cutoff\}$. As before, you can see that these tables show how the expected rewards change with the payoff for each child.
graphB	An example of what a complete graph for Practice Card B (and all following cards) may have looked like is provided on page 40 (Figure 3b). PRACTICE CARD B: (50 MWK per point above $\\$ \{cutoff\}$ for $\\$ \{childA\}$, 10 MKW per point above $\\$ \{cutoff\}$ for $\\$ \{childB\}$) Now we are going to draw the second graph. From now on, in the interest of time, I'm only going to draw the outer two bars, corresponding to giving all tickets to $\\$ \{childA\}$ or $\\$ \{childB\}$. You can still choose any of the options between them, I just won't draw them. This bar chart is another way to see the information in the table. It shows how expected reward for $\\$ \{childA\}$ and $\\$ \{childB\}$ and total rewards depend on how you allocated tickets. Draw a graph with y axis labeled rewards and x axis with space for 11 bars. Below the x-axis, create a row labeled "Tickets to $\\$ \{childA\}$" and write the numbers 0-10 from left to right. Under this, create a row labeled "Tickets to $\\$ \{childB\}$" and write the numbers 10-0

	from left to right. With this card, if you allocate 0 tickets to $\{childA\}$ and 10 tickets to $\{childB\}$, $\{childA\}$'s expected reward is $\{childA\_CB\_0\}$ and $\{childB\}$'s expected reward is $\{childB\_CB\_10\}$. The total reward for this allocation is $\{total\_CB0\}$. Draw a bar for $\{childA\}$ from $y=0$ to $y=\{childA\_CB\_0\}$ and shade this in lightly. Label this region $\{childA\_CB\_0\}$. Draw a bar for $\{childB\}$ that starts from $y=\{childA\_CB\_0\}$ to $y=\{total\_CB0\}$ and do not shade in. Label this region $\{childB\_CB\_10\}$. Label top of bar $\{total\_CB0\}$. If you allocate 10 tickets to $\{childA\}$ and 0 tickets to $\{childB\}$, $\{childA\}$'s expected reward is $\{childA\_CB\_10\}$ and $\{childB\}$'s expected reward is $\{childB\_CB\_0\}$. The total reward for this allocation is $\{total\_CB10\}$. Draw a bar for $\{childA\}$ from $y=0$ to $y=\{childA\_CB\_10\}$ and shade this in lightly. Label this region $\{childA\_CB\_10\}$. Draw a bar for $\{childB\}$ that starts from $y=\{childA\_CB\_10\}$ to $y=\{total\_CB10\}$ and do not shade in. Label this region $\{childB\_CB\_0\}$. Label top of bar $\{total\_CB10\}$.
	Verify Understanding
cardB5	Do you have any questions? Now to make sure I explained things well, let me ask you a few questions. The goal is just to help you understand – don't worry if you get any wrong. How would you allocate your tickets IF:
cardB_q1	1. You would like to definitely give the tutoring to $\{childA\}$? For the first week of the survey, respondents were shown the following four answer options: • Give all my tickets to $\{childA\}$ • Give all my tickets to $\{childB\}$ • Give half my tickets to $\{childA\}$ and half to $\{childB\}$ • Allocate based on the graph (so expected rewards are the same) After a week, the answer options were changed so that parents could pick any number of tickets for each child (as in cardB_q1_A and cardB_q1_B below). 63 parents answered using the updated format; the remainder saw the original four answer options.
cardB_q1_A	Tickets to $\{childA\}$
cardB_q1_B	Tickets to $\{childB\}$
cardB_q2	2. You would like to definitely give the tutoring to $\{childB\}$? For the first week of the survey, respondents were shown the following four answer options: • Give all my tickets to $\{childA\}$ • Give all my tickets to $\{childB\}$ • Give half my tickets to $\{childA\}$ and half to $\{childB\}$ • Allocate based on the graph (so expected rewards are the same) After a week, the answer options were changed so that parents could pick any number of tickets for each child (as in cardB_q2_A and cardB_q2_B below). 63 parents answered using the updated format; the remainder saw the original four answer options.

cardB_q2_A	Tickets to \${childA}
cardB_q2_B	Tickets to \${childB}
cardB_q3	3. You would like to maximize the total reward across both children? For the first week of the survey, respondents were shown the following four answer options: • Give all my tickets to \${childA} • Give all my tickets to \${childB} • Give half my tickets to \${childA} and half to \${childB} • Allocate based on the graph (so expected rewards are the same) After a week, the answer options were changed so that parents could pick any number of tickets for each child (as in cardB_q3_A and cardB_q3_B below). 63 parents answered using the updated format; the remainder saw the original four answer options.
cardB_q3_A	Tickets to \${childA}
cardB_q3_B	Tickets to \${childB}
cardB_q4	4. You would like to give both children an equal opportunity to receive tutoring? For the first week of the survey, respondents were shown the following four answer options: • Give all my tickets to \${childA} • Give all my tickets to \${childB} • Give half my tickets to \${childA} and half to \${childB} • Allocate based on the graph (so expected rewards are the same) After a week, the answer options were changed so that parents could pick any number of tickets for each child (as in cardB_q4_A and cardB_q4_B below). 63 parents answered using the updated format; the remainder saw the original four answer options.
cardB_q4_A	Tickets to \${childA}
cardB_q4_B	Tickets to \${childB}
cardB_q5	5. You would like to give both children as close to the same reward as possible? For the first week of the survey, respondents were shown the following four answer options: • Give all my tickets to \${childA} • Give all my tickets to \${childB} • Give half my tickets to \${childA} and half to \${childB} • Allocate based on the graph (so expected rewards are the same) After a week, the answer options were changed so that parents could pick any number of tickets for each child (as in cardB_q5_A and cardB_q5_B below). 63 parents answered using the updated format; the remainder saw the original four answer options.
cardB_q5_A	Tickets to \${childA}
cardB_q5_B	Tickets to \${childB}
cardB_q1_wrong	[If child A was not allocated all 10 tickets in cardB_q1] The respondent answered this question wrong. Review with the respondent and ask the question again:

	<i>Let's try question 1 again. How would you allocate tickets if:</i> <i>1. You would like to definitely give the tutoring to \${childA}?</i> For the first week of the survey, respondents were shown the following four answer options: • Give all my tickets to \${childA} • Give all my tickets to \${childB} • Give half my tickets to \${childA} and half to \${childB} • Allocate based on the graph (so expected rewards are the same) After a week, the answer options were changed so that parents could pick any number of tickets for each child (as in cardB_q1_wrong_A and cardB_q1_wrong_B below).
cardB_q1_wrong_A	Tickets to \${childA} [If child A was not allocated all 10 tickets] Respondent answered incorrectly. Review with respondent and ask question again, until s/he gets the right answer
cardB_q1_wrong_B	Tickets to \${childB} [If child B was allocated any tickets] Respondent answered incorrectly. Review with respondent and ask question again, until s/he gets the right answer
cardB_q2_wrong	[If child B was not allocated all 10 tickets in cardB_q2] The respondent answered this question wrong. Review with the respondent and ask the question again: <i>Let's try question 2 again. How would you allocate tickets if:</i> <i>2. You would like to definitely give the tutoring to \${childB}?</i> For the first week of the survey, respondents were shown the following four answer options: • Give all my tickets to \${childA} • Give all my tickets to \${childB} • Give half my tickets to \${childA} and half to \${childB} • Allocate based on the graph (so expected rewards are the same) After a week, the answer options were changed so that parents could pick any number of tickets for each child (as in cardB_q2_wrong_A and cardB_q2_wrong_B below).
cardB_q2_wrong_A	Tickets to \${childA} [If child A was allocated any tickets] Respondent answered incorrectly. Review with respondent and ask question again, until s/he gets the right answer
cardB_q2_wrong_B	Tickets to \${childB} [If child B was not allocated all 10 tickets] Respondent answered incorrectly. Review with respondent and ask question again, until s/he gets the right answer

cardB_q3_wrong	[If child A was not allocated all 10 tickets in cardB_q3] The respondent answered this question wrong. Review with the respondent and ask the question again: <i>Let's try question 3 again. How would you allocate tickets if:</i> 3. <i>You would like to maximize the total reward across both children?</i> For the first week of the survey, respondents were shown the following four answer options: • Give all my tickets to \${childA} • Give all my tickets to \${childB} • Give half my tickets to \${childA} and half to \${childB} • Allocate based on the graph (so expected rewards are the same) After a week, the answer options were changed so that parents could pick any number of tickets for each child (as in cardB_q3_wrong_A and cardB_q3_wrong_B below).
cardB_q3_wrong_A	Tickets to \${childA} [If child A was not allocated all 10 tickets] Respondent answered incorrectly. Review with respondent and ask question again, until s/he gets the right answer
cardB_q3_wrong_B	Tickets to \${childB} [If child B was allocated any tickets] Respondent answered incorrectly. Review with respondent and ask question again, until s/he gets the right answer
cardB_q4_wrong	[If child A and child B were not both allocated 5 tickets in cardB_q4] The respondent answered this question wrong. Review with the respondent and ask the question again: <i>Let's try question 4 again. How would you allocate tickets if:</i> 4. <i>You would like to give both children an equal opportunity to receive tutoring??</i> For the first week of the survey, respondents were shown the following four answer options: • Give all my tickets to \${childA} • Give all my tickets to \${childB} • Give half my tickets to \${childA} and half to \${childB} • Allocate based on the graph (so expected rewards are the same) After a week, the answer options were changed so that parents could pick any number of tickets for each child (as in cardB_q4_wrong_A and cardB_q4_wrong_B below).
cardB_q4_wrong_A	Tickets to \${childA} [If child A was not allocated 5 tickets] Respondent answered incorrectly. Review with respondent and ask question again, until s/he gets the right answer
cardB_q4_wrong_B	Tickets to \${childB} [If child B was not allocated 5 tickets] Respondent answered incorrectly. Review with respondent and ask question again, until s/he gets the right answer

cardB_q5_wrong	[If CTO calculates answer was wrong in cardB_q5] The respondent answered this question wrong. Review with the respondent and ask the question again: <i>Let's try question 5 again. How would you allocate tickets if:</i> 5. <i>You would like to give both children as close to the same reward as possible?</i> For the first week of the survey, respondents were shown the following four answer options: • Give all my tickets to \${childA} • Give all my tickets to \${childB} • Give half my tickets to \${childA} and half to \${childB} • Allocate based on the graph (so expected rewards are the same) After a week, the answer options were changed so that parents could pick any number of tickets for each child (as in cardB_q5_wrong_A and cardB_q5_wrong_B below).
cardB_q5_wrong_A	Tickets to \${childA} [If CTO calculates answer is wrong] Respondent answered incorrectly. Review with respondent and ask question again, until s/he gets the right answer
cardB_q5_wrong_B	Tickets to \${childB} [If CTO calculates answer is wrong] Respondent answered incorrectly. Review with respondent and ask question again, until s/he gets the right answer
cardB_childA	What do you think you would have done if this was the real card? \${childA}?
cardB_childB	\${childB}?
cardB_fail	[If the sum of the tickets does not equal 10] The number of tickets does NOT equal 10. Go back and correct.
cardB_check	Why would you allocate \${cardB_childA} tickets to \${childA}, and \${cardB_childB} tickets to \${childB}? [make sure that the parents' explanation is consistent with their allocation]. ENUMERATOR : [DO NOT PROMPT. Select one/more responses based on parent's answer. Make sure parent's explanation is consistent with allocation. If not, find out what the parent wants to do and go back and adjust their ticket allocation as appropriate] Options 1. Prefer \${childA} to get tutoring 2. Prefer \${childB} to get tutoring 3. Want to equalize inputs (give both children an opportunity to get tutoring) 4. Want to equalize outcomes (i.e. equalize expected rewards) 5. Want to maximize returns (i.e. maximize total expected rewards) 6. Other

	For the first 4 days of the survey, surveyors were only asked to mark if the respondent understood (i.e. that their explanation was consistent with their allocation) as an answer to this question. For the 172 parents who answered on or after day 5, surveyors were shown the instructions and answer options listed above.
cardB_other	Other reason:
	Description of how the actual card will be chosen for the experiment
card_selection_note	I've just given you two different examples – conveyed by the two different sets of graphs and cards – for how each child's payout will depend on their test score. You're probably wondering, if this were the real experiment, which lottery ticket allocation, the one in Card A or Card B, will decide which child receives tutoring! In fact the answer is that I don't know the identity of that card! There are 5 different potential cards/options we might use for the actual experiment. I will go through each of the 5 different potential options with you and find out how you would want to allocate your lottery tickets if that card is chosen as the actual card for the experiment. After making allocations for all 5 cards, the computer will randomly assign 1 out of these 5 cards to you: I do not know which one. This card will be the "lucky card." Whichever card is chosen will show us how your children's rewards will depend on their scores in the actual experiment. At that point, we will conduct the lottery using whatever allocation you chose on that lucky card – you won't be able to change your allocation! So please make sure to consider each card carefully because it might end up being the lucky card! And if it is, you won't be able to change your answer later. To conduct the lottery, I'll write your children's names on these lottery tickets, following whatever allocation you originally gave on the lucky card. I will then place all the tickets in this box [show box] . We will then ask you to pick a lottery ticket with your eyes covered. Whichever child's ticket is chosen will win an hour of tutoring.
prac_pull	So, to make this concrete, let's pretend that these last two cards we did were the two cards used in the experiment. Then, after we filled them in, the computer will randomly assign 1 out of these 2 cards to you to be your lucky card: the surveyor does not know which card it is. For that card, based on your ticket allocations, we'll write your children's names on these lottery tickets, and place all the tickets in this box [show box] . We will then ask you to pick a lottery ticket. So, you see that the child with a higher allocation of lottery tickets has a greater chance of winning the lottery. Your allocations for the two practice cards were:
prac_note2	Now, if the computer randomly assigns Card B, we'll write $\{childA\}$'s name on $\{cardB\_childA\}$ lottery tickets, and $\{childB\}$'s name on $\{cardB\_childB\}$ tickets, and place all the tickets in this box [show box] . Similarly, if the computer randomly assigns Card A, we'll write $\{childA\}$'s name on $\{cardA\_childA\}$ lottery tickets, and $\{childB\}$'s name on $\{cardA\_childB\}$ lottery tickets, and place all the tickets in this box [show box] . We will then ask you to pick a lottery ticket. The surveyor will reveal the child that won an hour of tutoring. Do you have any questions? If they have questions respond before continuing.
prac_pull_card	Are you ready to have the computer select your card? Remember this is just a practice and not the actual card we will use.

prac_pulledA	[If random number < .5] OK so for this demo, the computer picked card A as your lucky card! That was the card where $\{childA\}$ gets 10 MWK per point above $\{cutoff\}$ and $\{childB\}$ got 50 MWK per point above $\{cutoff\}$ and you gave $\{cardA\_childA\}$ tickets to $\{childA\}$ and $\{cardA\_childB\}$ tickets to $\{childB\}$. So <i>if this were the real thing</i> we'd now write $\{childA\}$'s name on $\{cardA\_childA\}$ tickets and $\{childB\}$'s name on $\{cardA\_childB\}$ tickets and then draw a ticket who won the tutoring!" [mime writing name on lottery tickets] So notice that in the end it is only one card -- in this example card A -- that determines which lottery tickets we use and which child gets tutoring. Because your ticket allocation can make a big difference on which child gets tutoring, and because only one card is randomly selected by the computer as your lucky card, you should think of each card as a standalone card and evaluate it in isolation, pretending that that card is the card selected by the computer and thinking what you want to happen in that case. Please note: some cards will have higher rewards and some will have lower rewards. This means that the rewards your children will receive will ultimately depend on the lottery -- conducted by the computer -- that chooses a card. You might be lucky and have a card chosen where rewards are higher, or unlucky and have a card chosen where rewards are lower. If you are uncomfortable with having some chance of having low rewards and some chance of having high rewards, you are completely free to withdraw at this time.	[If random number >= .5] OK so for this demo, the computer picked card B as your lucky card! That was the card where $\{childA\}$ gets 50 MWK per point above $\{cutoff\}$ and $\{childB\}$ got 10 MWK per point above $\{cutoff\}$ and you gave $\{cardB\_childA\}$ tickets to $\{childA\}$ and $\{cardB\_childB\}$ tickets to $\{childB\}$. So <i>if this were the real thing</i> we'd now write $\{childA\}$'s name on $\{cardB\_childA\}$ tickets and $\{childB\}$'s name on $\{cardB\_childB\}$ tickets and then draw a ticket who won the tutoring!" [mime writing name on lottery tickets] So notice that in the end it is only one card -- in this example card B -- that determines which lottery tickets we use and which child gets tutoring. Because your ticket allocation can make a big difference on which child gets tutoring, and because only one card is randomly selected by the computer as your lucky card, you should think of each card as a standalone card and evaluate it in isolation, pretending that that card is the card selected by the computer and thinking what you want to happen in that case. Please note: some cards will have higher rewards and some will have lower rewards. This means that the rewards your children will receive will ultimately depend on the lottery -- conducted by the computer -- that chooses a card. You might be lucky and have a card chosen where rewards are higher, or unlucky and have a card chosen where rewards are lower. If you are uncomfortable with having some chance of having low rewards and some chance of having high rewards, you are completely free to withdraw at this time.
real_start	Now, let's start the actual experiment:	
real_start1	There are 5 cards in total that could each be your lucky card. We will now review all of them and see how you would like to allocate your tickets on each in the case that that card is randomly assigned by the computer as your lucky card. Remember that because only one card will eventually be chosen as the lucky card, you should think of each card	

	as a standalone card and evaluate it in isolation, pretending that that card is the card selected by the computer for the lottery and thinking what you want to happen in that case.
	Card 1
prep_enum_card1_1	ENUMERATOR PREP: Fill out the paper version of this visual aid based on the below table, which is based on the respondent's beliefs
practicecard1_dis	Here's your first card. With this card, both children get 10 MWK for every point scored over $\{cutoff\}$ on the test. So, if $\{childA\}$ gets $\{childA\_without\}$ points and $\{childB\}$ gets $\{childB\_without\}$ points, with this card, $\{childA\}$ would get a reward worth $(\{childA\_without\} - \{cutoff\})$ points X 10 MWK per point = $\{childA\_c1\_wo\}$ MWK, and $\{childB\}$ would get a reward worth $(\{childB\_without\} - \{cutoff\})$ points X 10 MWK per point = $\{childB\_c1\_wo\}$ MWK. So, the expected reward for each child depends on the score they receive, but with this card, both children get 10 MWK for each point scored.
card1_display	Without tutoring, you expected $\{childA\}$ to score $\{childA\_without\}$ on the test; if they do in fact score $\{childA\_without\}$, then $\{childA\}$ would get a prize worth $10 * (\{childA\_without\} - \{cutoff\}) = \{childA\_c1\_wo\}$ MWK. With tutoring, you expected $\{childA\}$ to get a score of $\{childA\_with\}$. If she did score $\{childA\_with\}$, he/she will receive a prize worth $10 * (\{childA\_with\} - \{cutoff\}) = \{childA\_c1\_w\}$ MWK. So, then the more tickets you give to $\{childA\}$, the higher chance you move them from a prize worth $\{childA\_c1\_wo\}$ MWK to a prize worth $\{childA\_c1\_w\}$ MWK. Similarly, without tutoring, you expected $\{childB\}$ to score $\{childB\_without\}$ on the test, which means that $\{childB\}$ would get a prize worth $10 * (\{childB\_without\} - \{cutoff\}) = \{childB\_c1\_wo\}$ MWK. With tutoring, you expected $\{childB\}$ to get a score of $\{childB\_with\}$. With this reward card, he/she will receive $10 * (\{childB\_with\} - \{cutoff\}) = \{childB\_c1\_w\}$ MWK. So, then the more tickets you give to $\{childB\}$, the higher chance you move them from a prize worth MWK $\{childB\_c1\_wo\}$ to a prize worth MWK $\{childB\_c1\_w\}$ Because your ticket allocation can make a big difference on which child gets tutoring, and because only one card is randomly selected by the computer, you should think of each card as a standalone card and evaluate it in isolation, pretending that that card is the card selected by the computer and thinking what you want to happen in that case.
card1_graph	CARD 1: (10 MWK per point above cutoff for $\{childA\}$ and $\{childB\}$) This bar chart is another way to see the information in the table. It shows how expected reward for $\{childA\}$ and $\{childB\}$ and total rewards depend on how you allocated tickets. <i>Draw a graph with y axis labeled rewards and x axis with space for 11 bars. Below the x-axis, create a row labeled "Tickets to $\{childA\}$" and write the numbers 0-10 from left to right. Under this, create a row labeled "Tickets to $\{childB\}$" and write the numbers 10-0 from left to right.</i> With this card, if you allocate 0 tickets to $\{childA\}$ and 10 tickets to $\{childB\}$, $\{childA\}$'s

	expected reward is $\\$ \{childA_c1_0\}$ and $\\$ \{childB\}$'s expected reward is $\\$ \{childB_c1_10\}$. The total reward for this allocation is $\\$ \{total_c10\}$. <i>Draw a bar for $\\$ \{childA\}$ from $y=0$ to $y=\\$ \{childA_c1_0\}$ and shade this in lightly. Label this region $\\$ \{childA_c1_0\}$. Draw a bar for $\\$ \{childB\}$ that starts from $y=\\$ \{childA_c1_0\}$ to $y=\\$ \{total_c10\}$ and do not shade in. Label this region $\\$ \{childB_c1_10\}$. Label top of bar $\\$ \{total_c10\}$.</i> If you allocate 10 tickets to $\\$ \{childA\}$ and 0 tickets to $\\$ \{childB\}$, $\\$ \{childA\}$'s expected reward is $\\$ \{childA_c1_10\}$ and $\\$ \{childB\}$'s expected reward is $\\$ \{childB_c1_0\}$. The total reward for this allocation is $\\$ \{total_c110\}$. <i>Draw a bar for $\\$ \{childA\}$ from $y=0$ to $y=\\$ \{childA_c1_10\}$ and shade this in lightly. Label this region $\\$ \{childA_c1_10\}$. Draw a bar for $\\$ \{childB\}$ that starts from $y=\\$ \{childA_c1_10\}$ to $y=\\$ \{total_c110\}$ and do not shade in. Label this region $\\$ \{childB_c1_0\}$. Label top of bar $\\$ \{total_c110\}$.</i>	
card1b_display	For instance, If $\\$ \{childA\}$ is allocated 0 tickets and $\\$ \{childB\}$ is allocated 10 tickets, expected reward for $\\$ \{childA\}$ is $\\$ \{childA_c1_0\}$, while expected reward for $\\$ \{childB\}$ is $\\$ \{childB_c1_10\}$. <i>[point to first row of table in which $\\$ \{childA\}$ is allocated 0 tickets]</i> If $\\$ \{childA\}$ is allocated 10 tickets and $\\$ \{childB\}$ is allocated 0 tickets, expected reward for $\\$ \{childA\}$ is $\\$ \{childA_c1_10\}$, while expected reward for $\\$ \{childB\}$ is $\\$ \{childB_c1_0\}$. <i>[point to last row of table in which $\\$ \{childA\}$ is allocated 10 tickets]</i> If you would like to maximize $\\$ \{childA\}$'s reward, you should allocate all tickets to $\\$ \{childA\}$ <i>[draw an arrow to last row of table in which $\\$ \{childA\}$ gets 10 tickets and label "highest reward for $\\$ \{childA\}$].</i> If you would like to maximize $\\$ \{childB\}$'s reward, you should allocate all tickets to $\\$ \{childB\}$ <i>[draw arrow to first row in table in which $\\$ \{childB\}$ gets 10 tickets and label "highest reward for $\\$ \{childB\}$].</i>	
card1b_racheck1	[If one child has a higher payment return to tutoring than the other] If you would like to maximize the total reward amount received by $\\$ \{childA\}$ and $\\$ \{childB\}$ combined, you would give the tutoring to $\\$ \{high_return_c1\}$ because s/he is the one whose expected reward would increase more with tutoring. To do that, you would allocate all the tickets to $\\$ \{high_return_c1\}$ <i>[draw an arrow to the row in which $\\$ \{high_return_c1\}$ gets 10 tickets and label "highest total reward"]</i>	[If both children have an equal payment return to tutoring] If you want to maximize the total reward amount received by $\\$ \{childA\}$ and $\\$ \{childB\}$ combined, it wouldn't matter how you allocate the tickets because they all have the same total expected reward -- the only thing that differs across allocations is the split between $\\$ \{childA\}$ and $\\$ \{childB\}$, not the total <i>(point to the total rewards column).</i>

card1b_display2	If you would like to give both children an equal opportunity to get tutoring, you should allocate tickets equally; 5 tickets to $\{childA\}$ and 5 tickets to $\{childB\}$. <i>[draw arrow to row in which $\{childA\}$ and $\{childB\}$ each get 5 tickets and label "equal tickets"]</i> .	
card1b_display3	[If the maximum potential earnings of child A are less than the minimum potential earnings of child B] If you would like to give both children as close to the same expected reward as possible, you should allocate 10 tickets to $\{childA\}$ and 0 tickets to $\{childB\}$. <i>[Draw an arrow to last row in which $\{childA\}$ gets 10 tickets and label "most equal rewards"]</i>	[If the maximum potential earnings of child A are greater than or equal to the minimum potential earnings of child B] If you would like to give both children as close to the same expected reward as possible, you should allocate more tickets to $\{childA\}$ than to $\{childB\}$. <i>[draw an arrow to bottom half of table in which $\{childA\}$ gets more tickets than $\{childB\}$ and label "most equal rewards"]</i>
card1_quest	Do you have any questions? <i>If they have questions answer them before selecting "no" and proceeding.</i>	
card1_allocate	So, here are 10 lottery tickets we'll ask you to divide these 10 lottery tickets between your children. One out of the 10 lottery tickets will be randomly selected by you, and the child whose ticket it is will receive one hour of tutoring. If that chosen lottery ticket belongs to " $\{childA\}$ ", he/she will receive tutoring, otherwise, " $\{childB\}$ " will receive tutoring. Thus, the child with a larger allocation of lottery tickets has a higher chance of receiving tutoring.	
card1_childA	Please allocate these 10 lottery tickets across your two children.	
card1_childA	Tickets: $\{childA\}$?	
card1_childB	Tickets: $\{childB\}$?	
card1_fail	[If the sum of the tickets does not equal 10] The number of tickets does NOT equal 10. Go back and correct.	
	Why did you allocate $\{childA\}$ - $\{card1\_childA\}$ tickets and $\{childB\}$ - $\{card1\_childB\}$ tickets?	
	ENUMERATOR: <i>[DO NOT PROMPT. Select one/more responses based on parent's answer. Make sure that the parents' explanation is consistent with their allocation. If not, find out what the parent wants to do and go back and adjust their ticket allocation as appropriate].</i> <i>Options</i> <i>1. Prefer $\{childA\}$ to get tutoring</i> <i>2. Prefer $\{childB\}$ to get tutoring</i> <i>3. Want to equalize inputs (give both children an opportunity to get tutoring)</i> <i>4. Want to equalize outcomes (i.e. equalize expected rewards)</i> <i>5. Want to maximize returns (i.e. maximize total expected rewards)</i> <i>6. Other</i>	
card1_check	For the first 4 days of the survey, surveyors were only asked to mark if the respondent understood (i.e. that their explanation was consistent with their allocation) as an answer	

	to this question. For the 172 parents who answered on or after day 5, surveyors were shown the instructions and answer options listed above.
card1_other	Other reason:
	Card 2
prep_enum_c2	ENUMERATOR PREP: Fill out the paper version of this visual aid based on the below table, which is based on the respondent's beliefs
practicecard2_dis	Here's your second card. With this card, both children will still receive 10 MWK for every point scored above $\{cutoff\}$ on the test, but $\{childA\}$ will also get an extra 1000 MWK irrespective of his/her score. $\{childB\}$ will not receive any additional payments besides the 10 MWK per point above $\{cutoff\}$. So, if $\{childA\}$ gets $\{childA\_without\}$ and $\{childB\}$ gets $\{childB\_without\}$, with this card, $\{childA\}$ would get a reward worth $(\{childA\_without\} - \{cutoff\}) \text{ points} \times 10 \text{ MWK per point}$ plus an additional 1000 MWK = $\{childA\_c2\_wo\}$ MWK, and $\{childB\}$ would get a reward worth $(\{childB\_without\} - \{cutoff\}) \text{ points} \times 10 \text{ MWK per point} = \{childB\_c2\_wo\}$ MWK. So, the expected reward for each child depends on the score they receive, but with this card, both children get 10 MWK for each point scored over $\{cutoff\}$ on the test, with $\{childA\}$ getting an additional 1000 MWK on top of that, which $\{childB\}$ does not receive.
card2_display	Without tutoring, you expected $\{childA\}$ to score $\{childA\_without\}$ on the test; if they do in fact score $\{childA\_without\}$, then $\{childA\}$ would get a prize worth $(10 * \{childA\_without\} - \{cutoff\}) + \text{an additional } 1000 \text{ MWK} = \{childA\_c2\_wo\} \text{ MWK}$. With tutoring, you expected $\{childA\}$ to get a score of $\{childA\_with\}$. If they did score $\{childA\_with\}$, he/she will receive a prize worth $(10 * \{childA\_with\} - \{cutoff\}) + \text{an additional } 1000 \text{ MWK} = \{childA\_c2\_w\} \text{ MWK}$. So, then the more tickets you give to $\{childA\}$, the higher chance you move them from a prize worth $\{childA\_c2\_wo\}$ MWK to a prize worth $\{childA\_c2\_w\}$ MWK. Similarly, without tutoring, you expected $\{childB\}$ to score $\{childB\_without\}$ on the test; if they do in fact score $\{childB\_without\}$, then $\{childB\}$ would get a prize worth $(10 * \{childB\_without\} - \{cutoff\}) = \{childB\_c2\_wo\} \text{ MWK}$. With tutoring, you expected $\{childB\}$ to get a score of $\{childB\_with\}$. If she did score $\{childB\_with\}$, he/she will receive a prize worth $(10 * \{childB\_with\} - \{cutoff\}) = \{childB\_c2\_w\} \text{ MWK}$. So, then the more tickets you give to $\{childB\}$, the higher chance you move them from a prize worth $\{childB\_c2\_wo\}$ MWK to a prize worth $\{childB\_c2\_w\}$ MWK. Because your ticket allocation can make a big difference on which child gets tutoring, and because only one card is randomly selected by the computer, you should think of each card as a standalone card and evaluate it in isolation, pretending that that card is the card selected by the computer and thinking what you want to happen in that case
card2_graph	CARD 2: (10 MWK for each point above cutoff for both , 1000 MWK bonus for $\{childA\}$) This bar chart is another way to see the information in the table. It shows how expected reward for $\{childA\}$ and $\{childB\}$ and total rewards depend on how you allocated tickets. <i>Draw a graph with y axis labeled rewards and x axis with space for 11 bars. Below the x-</i>

	axis, create a row labeled "Tickets to $\{childA\}$" and write the numbers 0-10 from left to right. Under this, create a row labeled "Tickets to $\{childB\}$" and write the numbers 10-0 from left to right. With this card, if you allocate 0 tickets to $\{childA\}$ and 10 tickets to $\{childB\}$, $\{childA\}$'s expected reward is $\{childA\_c2\_0\}$ and $\{childB\}$'s expected reward is $\{childB\_c2\_10\}$. The total reward for this allocation is $\{total\_c20\}$. <i>Draw a bar for $\{childA\}$ from $y=0$ to $y=\{childA\_c2\_0\}$ and shade this in lightly. Label this region $\{childA\_c2\_0\}$. Draw a bar for $\{childB\}$ that starts from $y=\{childA\_c2\_0\}$ to $y=\{total\_c20\}$ and do not shade in. Label this region $\{childB\_c2\_10\}$. Label top of bar $\{total\_c20\}$.</i> If you allocate 10 tickets to $\{childA\}$ and 0 tickets to $\{childB\}$, $\{childA\}$'s expected reward is $\{childA\_c2\_10\}$ and $\{childB\}$'s expected reward is $\{childB\_c2\_0\}$. The total reward for this allocation is $\{total\_c210\}$. <i>Draw a bar for $\{childA\}$ from $y=0$ to $y=\{childA\_c2\_10\}$ and shade this in lightly. Label this region $\{childA\_c2\_10\}$. Draw a bar for $\{childB\}$ that starts from $y=\{childA\_c2\_10\}$ to $y=\{total\_c210\}$ and do not shade in. Label this region $\{childB\_c2\_0\}$. Label top of bar $\{total\_c210\}$.</i>	
card2_compare_card1	More comparison to previous card: So this card is very similar to the last card, where both children received 10 MWK for every point scored above $\{cutoff\}$. The only difference is that now $\{childA\}$ also gets an additional 1000 MWK added onto their payment. So this means that if you chose the same ticket allocation as on the first card, $\{childA\}$ would get a 1000 MWK larger reward whereas child B would get the same reward. On card 1, you gave $\{card1\_childA\}$ to $\{childA\}$ and $\{card1\_childB\}$ to $\{childB\}$. In this card, that means $\{childA\}$'s expected reward would be $\{card2\_childA\_exp\}$ and $\{childB\}$'s expected reward would be $\{card2\_childB\_exp\}$.	
card2b_display	More generally, the fact that, relative to card 1, there is no change in the MWK per point for either child, but $\{childA\}$ has a higher base reward means that: If you would like to maximize $\{childA\}$'s reward or $\{childB\}$'s reward, you would do the same thing as before: allocate all tickets to $\{childA\}$ or $\{childB\}$ <i>[draw an arrow to last row in which $\{childA\}$ gets 10 tickets and label "highest reward for $\{childA\}$; draw an arrow to first row in which $\{childB\}$ gets 10 tickets and label "highest reward to $\{childB\}$"]</i>	
card2b_RAcheck1	[If one child has a higher payment return to tutoring than the other] Similarly, if you would like to maximize the total reward amount received by $\{childA\}$ and $\{childB\}$ combined, you would still give the tutoring to $\{high\_return\_c2\}$ because s/he is the one whose expected reward would increase more with tutoring. To do that, you would allocate all the tickets to $\{high\_return\_c2\}$. <i>[draw arrow to row in which $\{high\_return\_c2\}$ gets 10 tickets and label "highest total reward"]</i>	
card2b_display2	Likewise, if you would like to give both children an equal opportunity to get tutoring, you would still allocated tickets equally: 5 tickets to $\{childA\}$ and 5 tickets to $\{childB\}$ <i>[draw arrow to row in which $\{childA\}$ and $\{childB\}$ each get 5 tickets and label "equal tickets"]</i>.	
card2b_display3	[If the maximum expected earnings of child B are less than the minimum expected earnings of child A, and the parent did not allocate all 10 tickets to child B on card 1] The only difference is	[If the maximum expected earnings of child B are greater than or equal to the minimum expected earnings of child A, and the parent did not allocate all 10 tickets to child B on card 1] The only

	that, if you would like to give both children as close to the same expected reward as possible, then you would change your allocation relative to Card 1: you would allocate 10 tickets to $\{childB\}$ and 0 $\{childA\}$ <i>[draw arrow to top row in which $\{childB\}$ gets 10 tickets and lable "most equal rewards"]</i> .	difference is that, if you would like to give both children as close to the same expected reward as possible, then you would change your allocation relative to Card 1: you would allocate more tickets to $\{childB\}$ than $\{childA\}$ <i>[draw arrow to top half of table in which $\{childB\}$ gets more tickets than $\{childA\}$ and lable "most equal rewarads"]</i> .
card2_quest	Do you have any questions? <i>If they have questions answer them before selecting "no" and proceeding.</i>	
	So, here are 10 tickets we'll ask you to divide these 10 lottery tickets between your children. One out of the 10 lottery tickets will be randomly selected by you, and the child whose ticket it is will receive one hour of tutoring. If that chosen lottery ticket belongs to " $\{childA\}$ ", he/she will receive tutoring, otherwise, " $\{childB\}$ " will receive tutoring. Thus, the child with a larger allocation of lottery tickets has a higher chance of receiving tutoring.	
card2_allocate	Please allocate these 10 lottery tickets across your two children.	
card2_childA	Tickets: $\{childA\}$?	
card2_childB	Tickets: $\{childB\}$?	
card2_fail	<i>[If the sum of the tickets does not equal 10]</i> The number of tickets does NOT equal 10. Go back and correct.	
	Why did you allocate $\{childA\}$ - $\{card2\_childA\}$ tickets and $\{childB\}$ - $\{card2\_childB\}$ tickets?	
	ENUMERATOR: <i>[DO NOT PROMPT. Select one/more responses based on parent's answer. Make sure that the parents' explanation is consistent with their allocation. If not, find out what the parent wants to do and go back and adjust their ticket allocation as appropriate].</i>	
	Options	
	1. <i>Prefer $\{childA\}$ to get tutoring</i> 2. <i>Prefer $\{childB\}$ to get tutoring</i> 3. <i>Want to equalize inputs (give both children an opportunity to get tutoring)</i> 4. <i>Want to equalize outcomes (i.e. equalize expected rewards)</i> 5. <i>Want to maximize returns (i.e. maximize total expected rewards)</i> 6. <i>Other</i>	
card2_check	For the first 4 days of the survey, surveyors were only asked to mark if the respondent understood (i.e. that their explanation was consistent with their allocation) as an answer to this question. For the 172 parents who answered on or after day 5, surveyors were shown the instructions and answer options listed above.	
card2_other	Other reason:	

	Card 3
prep_enum_c3	ENUMERATOR PREP: Fill out the paper version of this visual aid based on the below table, which is based on the respondent's beliefs
practicecard3_dis	Here's your third card. On this card, $\{childA\}$ gets 10 MWK for every point scored over $\{cutoff\}$, whereas $\{childB\}$ will get ten times as many MWK in rewards per score point over $\{cutoff\}$ – $\{childB\}$ will get 100 MWK per point scored over $\{cutoff\}$ on the test. Neither child receives any additional payment irrespective of their score. So, if $\{childA\}$ gets $\{childA\_without\}$ points and $\{childB\}$ gets $\{childB\_without\}$ points, with this card, Child A would get a reward worth $(\{childA\_without\} - \{cutoff\} \text{ points} \times 10 \text{ MWK per point}) = \{childA\_c3\_wo\}$ MWK, and Child B would get a reward worth $(\{childB\_without\} - \{cutoff\} \text{ points} \times 100 \text{ MWK per point}) = \{childB\_c3\_wo\}$ MWK. So, the expected reward for each child depends on the score they receive, but with this card, $\{childA\}$ gets 10 MWK for each point over $\{cutoff\}$, while $\{childB\}$ gets 100 MWK for every point scored over $\{cutoff\}$ on the test.
card3_display	Without tutoring, you expected $\{childA\}$ to score $\{childA\_without\}$ on the test, which means that $\{childA\}$ would get a prize worth $10 * (\{childA\_without\} - \{cutoff\}) = \{childA\_c3\_wo\}$ MWK. With tutoring, you expected $\{childA\}$ to get a score of $\{childA\_with\}$. With this reward card, he/she will receive a prize worth $10 * (\{childA\_with\} - \{cutoff\}) = \{childA\_c3\_w\}$ MWK. So, then the more tickets you give to $\{childA\}$, the higher chance you move them from a prize worth $\{childA\_c3\_wo\}$ MWK to a prize worth $\{childA\_c3\_w\}$. Similarly, without tutoring, you expected $\{childB\}$ to score $\{childB\_without\}$ on the test, which means that $\{childB\}$ would get a prize worth $100 * (\{childB\_without\} - \{cutoff\}) = \{childB\_c3\_wo\}$ MWK. With tutoring, you expected $\{childB\}$ to get a score of $\{childB\_with\}$. With this reward card, he/she will receive $100 * (\{childB\_with\} - \{cutoff\}) \text{ MWK} = \{childB\_c3\_w\}$. So, then the more tickets you give to $\{childB\}$, the higher chance you move them from a prize worth MWK $\{childB\_c3\_wo\}$ to a prize worth MWK $\{childB\_c3\_w\}$. Because your ticket allocation can make a big difference on which child gets tutoring, and because only one card is randomly selected by the computer, you should think of each card as a standalone card and evaluate it in isolation, pretending that that card is the card selected by the computer and thinking what you want to happen in that case
card3_graph	This bar chart is another way to see the information in the table. It shows how expected reward for $\{childA\}$ and $\{childB\}$ and total rewards depend on how you allocated tickets. <i>Draw a graph with y axis labeled rewards and x axis with space for 11 bars. Below the x-axis, create a row labeled "Tickets to $\{childA\}$" and write the numbers 0-10 from left to right. Under this, create a row labeled "Tickets to $\{childB\}$" and write the numbers 10-0 from left to right.</i> With this card, if you allocate 0 tickets to $\{childA\}$ and 10 tickets to $\{childB\}$, $\{childA\}$'s expected reward is $\{childA\_c3\_0\}$ and $\{childB\}$'s expected reward is $\{childB\_c3\_10\}$. The total reward for this allocation is $\{total\_c30\}$. <i>Draw a bar for $\{childA\}$ from $y=0$ to $y=\{childA\_c3\_0\}$ and shade this in lightly. Label this region $\{childA\_c3\_0\}$. Draw a bar for $\{childB\}$ that starts from $y=\{childA\_c3\_0\}$ to $y=\{total\_c30\}$ and do not shade in.</i>

	<i>Label this region $\{childB\_c3\_10\}$. Label top of bar $\{total\_c30\}$.</i> If you allocate 10 tickets to $\{childA\}$ and 0 tickets to $\{childB\}$, $\{childA\}$'s expected reward is $\{childA\_c3\_10\}$ and $\{childB\}$'s expected reward is $\{childB\_c3\_0\}$. The total reward for this allocation is $\{total\_c310\}$. <i>Draw a bar for $\{childA\}$ from $y=0$ to $y=\{childA\_c3\_10\}$ and shade this in lightly. Label this region $\{childA\_c3\_10\}$. Draw a bar for $\{childB\}$ that starts from $y=\{childA\_c3\_10\}$ to $y=\{total\_c310\}$ and do not shade in. Label this region $\{childB\_c3\_0\}$. Label top of bar $\{total\_c310\}$.</i>	
card3_compare_card2	More comparison to Card 1: Let's compare this card to card 1 – on that card, both kids received 10 MWK per point above $\{cutoff\}$, whereas on this card, $\{childA\}$ is still receiving 10 MWK per point whereas $\{childB\}$ is receiving 10 times that much. So the fact that $\{childB\}$ now earns ten times as much reward per point over $\{cutoff\}$ as $\{childA\}$ means that, relative to card 1, if you chose the same ticket allocation as before, $\{childB\}$ would get ten times as large a reward whereas $\{childA\}$ would get the same reward. On card 1 you gave $\{card1\_childA\}$ tickets to $\{childA\}$ and $\{card1\_childB\}$ tickets to $\{childB\}$. In this card, that means $\{childA\}$'s expected reward would be $\{card3\_childA\_exp\}$ and $\{childB\}$'s expected reward would be $\{card3\_childB\_exp\}$.	
card3b_display	More generally, the fact that $\{childA\}$ and $\{childB\}$ get different rewards per point means that the more tickets you allocate to $\{childB\}$, the more you • increase the expected amount $\{childB\}$ gets relative to $\{childA\}$ by making it more likely that $\{childB\}$ will get the tutoring • increase the total reward amount received by your kids, since $\{childB\}$ gets more rewards per point. This means that if you would like to maximize the total reward amount received by both your kids, you would give all the tickets to $\{childB\}$ <i>[draw an arrow to the top row in which $\{childB\}$ gets 10 tickets and label "highest total reward"]</i>	
card3b_display2	[If the maximum expected earnings of child A are less than the minimum expected earnings of child B] If you would like to give both children as close to the same expected reward as possible, you should allocate 10 tickets to $\{childA\}$ and 0 tickets $\{childB\}$ <i>[draw an arrow to bottom row of table in which $\{childA\}$ gets 10 tickets and label "most equal reward"]</i>.	[If the maximum expected earnings of child A are greater than or equal to the minimum expected earnings of child B] If you would like to give both children as close to the same expected reward as possible, you should allocate more tickets to $\{childA\}$ than $\{childB\}$ <i>[draw an arrow to bottom half of table in which $\{childA\}$ gets more tickets than $\{childB\}$ and label "most equal reward"]</i>.
card3b_display4	And, like before, if you would like to maximize $\{childA\}$'s reward, you should allocate all tickets to $\{childA\}$ <i>[draw an arrow to bottom row of table in which $\{childA\}$ gets 10 tickets and label "highest reward for $\{childA\}$"]</i>. If you would like to maximize $\{childB\}$'s reward, you should allocate all tickets to $\{childB\}$ <i>[draw an arrow to first row of table in which $\{childB\}$ gets 10 tickets and label "highest reward for $\{childB\}$"]</i>.	

	If you would like to give both children an equal opportunity to get tutoring, you should allocate tickets equally; 5 tickets to $\{childA\}$ and 5 tickets to $\{childB\}$ <i>[draw an arrow to row in which both $\{childA\}$ and $\{childB\}$ get 5 tickets and label "equal tickets"]</i>
card3_quest	Do you have any questions? <i>If they have questions answer them before selecting "no" and proceeding.</i>
	So, here are 10 tickets we'll ask you to divide these 10 lottery tickets between your children. One out of the 10 lottery tickets will be randomly selected by you, and the child whose ticket it is will receive one hour of tutoring. If that chosen lottery ticket belongs to " $\{childA\}$ ", he/she will receive tutoring, otherwise, " $\{childB\}$ " will receive tutoring. Thus, the child with a larger allocation of lottery tickets has a higher chance of receiving tutoring.
card3_allocate	Please allocate these 10 lottery tickets across your two children.
card3_childA	Tickets: $\{childA\}$?
card3_childB	Tickets: $\{childB\}$?
card3_fail	<i>[If the sum of the tickets is not 10] The number of tickets does NOT equal 10. Go back and correct.</i>
	Why did you allocate $\{childA\}$ - $\{card3\_childA\}$ tickets and $\{childB\}$ - $\{card3\_childB\}$ tickets? ENUMERATOR: <i>[DO NOT PROMPT. Select one/more responses based on parent's answer. Make sure that the parents' explanation is consistent with their allocation. If not, find out what the parent wants to do and go back and adjust their ticket allocation as appropriate].</i> <i>Options</i> <i>1. Prefer $\{childA\}$ to get tutoring</i> <i>2. Prefer $\{childB\}$ to get tutoring</i> <i>3. Want to equalize inputs (give both children an opportunity to get tutoring)</i> <i>4. Want to equalize outcomes (i.e. equalize expected rewards)</i> <i>5. Want to maximize returns (i.e. maximize total expected rewards)</i> <i>6. Other</i> For the first 4 days of the survey, surveyors were only asked to mark if the respondent understood (i.e. that their explanation was consistent with their allocation) as an answer to this question. For the 172 parents who answered on or after day 5, surveyors were shown the instructions and answer options listed above.
card3_check	
card3_other	<i>Other reason:</i>
	Card 4
enum_prep_c4	ENUMERATOR PREP: Fill out the paper version of this visual aid based on the below table, which is based on the respondent's beliefs
practicecard4_dis	Here's your fourth card . Here, $\{childA\}$ will get more reward per point: he/she will get 100 MWK for every point scored over $\{cutoff\}$ on the test. $\{childB\}$ in contrast only

	gets 10 MWK per score point over $\{cutoff\}$ on the test. However, $\{childB\}$ will <i>also</i> get an extra $\{c4\_base\}$ MWK irrespective of his/her score. So, if $\{childA\}$ gets $\{childA\_without\}$ points and $\{childB\}$ gets $\{childB\_without\}$ points, with this card, $\{childA\}$ would get a reward worth $(\{childA\_without\} - \{cutoff\}) \times 100$ MWK per point = $\{childA\_c4\_wo\}$ MWK, and $\{childB\}$ would get a reward worth $(\{childB\_without\} - \{cutoff\}) \times 10$ MWK per point + $\{c4\_base\}$ MWK = $\{childB\_c4\_wo\}$ MWK. So, the expected reward for each child depends on the score they receive, but with this card, $\{childA\}$ gets 100 MWK for each point over $\{cutoff\}$, and although $\{childB\}$ gets only 10 MWK for each point over $\{cutoff\}$, he/she also gets an additional $\{c4\_base\}$ MWK irrespective of his/her score.
card4_display	Without tutoring, you expected $\{childA\}$ to score $\{childA\_without\}$ on the test, which means that $\{childA\}$ would get a prize worth $100 \times (\{childA\_without\} - \{cutoff\}) = \{childA\_c4\_wo\}$ MWK. With tutoring, you expected $\{childA\}$ to get a score of $\{childA\_with\}$. With this reward card, he/she will receive a prize worth $100 \times (\{childA\_with\} - \{cutoff\}) = \{childA\_c4\_w\}$ MWK. So, then the more tickets you give to $\{childA\}$, the higher chance you move them from a prize worth $\{childA\_c4\_wo\}$ MWK to a prize worth $\{childA\_c4\_w\}$ MWK. Similarly, without tutoring, you expected $\{childB\}$ to score $\{childB\_without\}$ on the test, which means that $\{childB\}$ would get a prize worth $[10 \times (\{childB\_without\} - \{cutoff\}) + \{c4\_base\}] = \{childB\_c4\_wo\}$ MWK. With tutoring, you expected $\{childB\}$ to get a score of $\{childB\_with\}$. With this reward card, he/she will receive $[10 \times (\{childB\_with\} - \{cutoff\}) + \{c4\_base\}] = \{childB\_c4\_w\}$ MWK. So, then the more tickets you give to $\{childB\}$, the higher chance you move them from a prize worth MWK $\{childB\_c4\_wo\}$ to a prize worth MWK $\{childB\_c4\_w\}$. Because your ticket allocation can make a big difference on which child gets tutoring, and because only one card is randomly selected by the computer, you should think of each card as a standalone card and evaluate it in isolation, pretending that that card is the card selected by the computer and thinking what you want to happen in that case
card4_graph	CARD 4: (100 MWK for each point above cutoff for $\{childA\}$, 10 MWK for each point above $\{cutoff\}$ + $\{c4\_base\}$ bonus for $\{childB\}$) This bar chart is another way to see the information in the table. It shows how expected reward for $\{childA\}$ and $\{childB\}$ and total rewards depend on how you allocated tickets. <i>Draw a graph with y axis labeled rewards and x axis with space for 11 bars. Below the x-axis, create a row labeled “Tickets to $\{childA\}$” and write the numbers 0-10 from left to right. Under this, create a row labeled “Tickets to $\{childB\}$” and write the numbers 10-0 from left to right.</i> With this card, if you allocate 0 tickets to $\{childA\}$ and 10 tickets to $\{childB\}$, $\{childA\}$'s expected reward is $\{childA\_c4\_0\}$ and $\{childB\}$'s expected reward is $\{childB\_c4\_10\}$. The total reward for this allocation is $\{total\_c40\}$. <i>Draw a bar for $\{childA\}$ from $y=0$ to $y=\{childA\_c4\_0\}$ and shade this in lightly. Label this region $\{childA\_c4\_0\}$. Draw a bar for $\{childB\}$ that starts from $y=\{childA\_c4\_0\}$ to $y=\{total\_c40\}$ and do not shade in.</i>

	<i>Label this region $\{childB\_c4\_10\}$. Label top of bar $\{total\_c40\}$.</i> If you allocate 10 tickets to $\{childA\}$ and 0 tickets to $\{childB\}$, $\{childA\}$'s expected reward is $\{childA\_c4\_10\}$ and $\{childB\}$'s expected reward is $\{childB\_c4\_0\}$. The total reward for this allocation is $\{total\_c410\}$. <i>Draw a bar for $\{childA\}$ from $y=0$ to $y=\{childA\_c4\_10\}$ and shade this in lightly. Label this region $\{childA\_c4\_10\}$. Draw a bar for $\{childB\}$ that starts from $y=\{childA\_c4\_10\}$ to $y=\{total\_c410\}$ and do not shade in. Label this region $\{childB\_c4\_0\}$. Label top of bar $\{total\_c410\}$.</i>	
card4_compare_card2	More comparison to previous card: There's a couple key differences relative to the previous card: • Now it's $\{childA\}$ who earns ten times as much reward per point as $\{childB\}$ as opposed to the previous card, where $\{childB\}$ earned ten times as much per point as $\{childA\}$. • However, note that compared to the previous card, $\{childB\}$ now earns an additional $\{c4\_base\}$ MWK irrespective of his/her score, while $\{childA\}$ gets no extra reward. So on this card there are two things to notice: • Regardless of how many tickets you allocate to $\{childA\}$, $\{childB\}$'s expected reward will be higher than $\{childA\}$'s expected reward, because $\{childB\}$ gets $\{c4\_base\}$ MWK whether or not he/she receives tutoring, • $\{childA\}$'s reward would increase a lot more from receiving tutoring than $\{childB\}$'s would, because $\{childA\}$ receives ten times as many MWK per point as $\{childB\}$ does.	
card4b_display	More generally, the fact that $\{childA\}$ gets more rewards per point means that the more tickets you allocate to $\{childA\}$, the more you • increase the expected amount $\{childA\}$ gets relative to $\{childB\}$ by making it more likely that $\{childA\}$ will get the tutoring • increase the total reward amount received by your kids, since $\{childA\}$ gets more rewards per point. This means that if you would like to maximize the total reward amount received by both your kids, you would give all the tickets to $\{childA\}$ <i>[draw an arrow to the bottom row where $\{childA\}$ receives 10 tickets and label "highest total reward"]</i>	
card4b_display2	[If the maximum potential earnings of child A are less than the minimum potential earnings of child B] In fact, with this card, if you would like to give both as close to the same expected reward as possible, you should still allocate 10 tickets to $\{childA\}$ and 0 tickets to $\{childB\}$ <i>[draw an arrow to bottom row of table in which $\{childA\}$ gets 10 tickets and lable "most equal reward"]</i>; this is because, although $\{childA\}$ gets more rewards per point, $\{childB\}$ gets that extra $\{c4\_base\}$ MWK irrespective of his/her score	[If the maximum potential earnings of child A are greater than or equal to the minimum potential earnings of child B] In fact, with this card, if you would like to give both as close to the same expected reward as possible, you should still allocate more tickets to $\{childA\}$ than $\{childB\}$ <i>[draw an arrow to bottom half of table in which $\{childA\}$ gets more tickets than $\{childB\}$ and label "most equal reward"]</i>; this is because, although $\{childA\}$ gets more rewards per point, $\{childB\}$ gets that

	extra \${c4_base} MWK irrespective of his/her score
card4b_display4	If instead you would like to give both children an equal opportunity to get tutoring, you should allocate 5 tickets to \${childA} and 5 tickets to \${childB} <i>[draw arrow to the row in which \${childA} and \${childB} each receive 5 tickets and label "equal tickets"]</i> .
card4_quest	Do you have any questions? <i>If they have questions answer them before selecting "no" and proceeding.</i>
	So, here are 10 tickets we'll ask you to divide these 10 lottery tickets between your children. One out of the 10 lottery tickets will be randomly selected by you, and the child whose ticket it is will receive one hour of tutoring. If that chosen lottery ticket belongs to "\${childA}", he/she will receive tutoring, otherwise, "\${childB}" will receive tutoring. Thus, the child with a larger allocation of lottery tickets has a higher chance of receiving tutoring.
card4_allocate	Please allocate these 10 lottery tickets across your two children.
card4_childA	Tickets: \${childA}?
card4_childB	Tickets: \${childB}?
card4_fail	<i>[If the sum of the tickets does not equal 10]</i> The number of tickets does NOT equal 10. Go back and correct.
	Why did you allocate \${childA} - \${card4_childA} tickets and \${childB} - \${card4_childB} tickets?
	ENUMERATOR: <i>[DO NOT PROMPT. Select one/more responses based on parent's answer. Make sure that the parents' explanation is consistent with their allocation. If not, find out what the parent wants to do and go back and adjust their ticket allocation as appropriate].</i>
	Options 1. Prefer \${childA} to get tutoring 2. Prefer \${childB} to get tutoring 3. Want to equalize inputs (give both children an opportunity to get tutoring) 4. Want to equalize outcomes (i.e. equalize expected rewards) 5. Want to maximize returns (i.e. maximize total expected rewards) 6. Other
card4_check	For the first 4 days of the survey, surveyors were only asked to mark if the respondent understood (i.e. that their explanation was consistent with their allocation) as an answer to this question. For the 172 parents who answered on or after day 5, surveyors were shown the instructions and answer options listed above.
card4_other	Other reason:
	Card 5
enum_prep_card5	ENUMERATOR PREP: Fill out the paper version of this visual aid based on the below table, which is based on the respondent's beliefs

practicecard5_dis	Here's your fifth card. Like the previous card, $\{childA\}$ will get 100 MWK for every point scored over $\{cutoff\}$ on the test, whereas $\{childB\}$ will get 10 MWK in rewards for every point over $\{cutoff\}$. However, unlike the previous card, $\{childB\}$ will not get an extra $\{c4\_base\}$ MWK. So, if $\{childA\}$ gets $\{childA\_without\}$ points and $\{childB\}$ gets $\{childB\_without\}$ points, with this card, $\{childA\}$ would get a reward worth $(\{childA\_without\} - \{cutoff\}) \times 100$ MWK per point = $\{childA\_c5\_wo\}$ MWK, and $\{childB\}$ would get a reward worth $(\{childB\_without\} - \{cutoff\}) \times 10$ MWK per point = $\{childB\_c5\_wo\}$ MWK. So, the expected reward for each child depends on the score they receive, but with this card, $\{childA\}$ gets 100 MWK per point over $\{cutoff\}$, while $\{childB\}$ gets 10 MWK for every point over scored $\{cutoff\}$ on the test, but does not get an additional $\{c4\_base\}$ MWK like before.
card5_display	Without tutoring, you expected $\{childA\}$ to score $\{childA\_without\}$ on the test, which means that $\{childA\}$ would get a prize worth $100 \times (\{childA\_without\} - \{cutoff\}) = \{childA\_c5\_wo\}$ MWK. With tutoring, you expected $\{childA\}$ to get a score of $\{childA\_with\}$. With this reward card, he/she will receive a prize worth $100 \times (\{childA\_with\} - \{cutoff\}) = \{childA\_c5\_w\}$ MWK. So, then the more tickets you give to $\{childA\}$, the higher chance you move them from a prize worth $\{childA\_c5\_wo\}$ MWK to a prize worth $\{childA\_c5\_w\}$ MWK. Similarly, without tutoring, you expected $\{childB\}$ to score $\{childB\_without\}$ on the test, which means that $\{childB\}$ would get a prize worth $10 \times (\{childB\_without\} - \{cutoff\}) = \{childB\_c5\_wo\}$ MWK. With tutoring, you expected $\{childB\}$ to get a score of $\{childB\_with\}$. With this reward card, he/she will receive $10 \times (\{childB\_with\} - \{cutoff\}) = \{childB\_c5\_w\}$ MWK. So, then the more tickets you give to $\{childB\}$, the higher chance you move them from a prize worth MWK $\{childB\_c5\_wo\}$ to a prize worth MWK $\{childB\_c5\_w\}$. Because your ticket allocation can make a big difference on which child gets tutoring, and because only one card is randomly selected by the computer, you should think of each card as a standalone card and evaluate it in isolation, pretending that that card is the card selected by the computer and thinking what you want to happen in that case
card5_graph	CARD 5: (100 MWK for each point above cutoff for $\{childA\}$, 10 MWK for each point above cutoff for $\{childB\}$) This bar chart is another way to see the information in the table. It shows how expected reward for $\{childA\}$ and $\{childB\}$ and total rewards depend on how you allocated tickets. <i>Draw a graph with y axis labeled rewards and x axis with space for 11 bars. Below the x-axis, create a row labeled "Tickets to $\{childA\}$" and write the numbers 0-10 from left to right. Under this, create a row labeled "Tickets to $\{childB\}$" and write the numbers 10-0 from left to right.</i> With this card, if you allocate 0 tickets to $\{childA\}$ and 10 tickets to $\{childB\}$, $\{childA\}$'s expected reward is $\{childA\_c5\_0\}$ and $\{childB\}$'s expected reward is $\{childB\_c5\_10\}$. The total reward for this allocation is $\{total\_c50\}$. <i>Draw a bar for $\{childA\}$ from y=0 to</i>

	$y = \{childA\_c5\_0\}$ and shade this in lightly. Label this region $\{childA\_c5\_0\}$. Draw a bar for $\{childB\}$ that starts from $y = \{childA\_c5\_0\}$ to $y = \{total\_c50\}$ and do not shade in. Label this region $\{childB\_c5\_10\}$. Label top of bar $\{total\_c50\}$. If you allocate 10 tickets to $\{childA\}$ and 0 tickets to $\{childB\}$, $\{childA\}$'s expected reward is $\{childA\_c5\_10\}$ and $\{childB\}$'s expected reward is $\{childB\_c5\_0\}$. The total reward for this allocation is $\{total\_c510\}$. Draw a bar for $\{childA\}$ from $y=0$ to $y = \{childA\_c5\_10\}$ and shade this in lightly. Label this region $\{childA\_c5\_10\}$. Draw a bar for $\{childB\}$ that starts from $y = \{childA\_c5\_10\}$ to $y = \{total\_c510\}$ and do not shade in. Label this region $\{childB\_c5\_0\}$. Label top of bar $\{total\_c510\}$.	
card5_compare_card2	More comparison to previous card: So the fact that $\{childA\}$ still earns ten times as much reward per point as $\{childB\}$, but that $\{childB\}$ does not earn an extra $\{c4\_base\}$ MWK means that relative to the previous card, if you chose the same ticket allocation as before, $\{childA\}$ would get the same reward but $\{childB\}$ would get a reward $\{c4\_base\}$ MWK smaller than the reward earned in the previous card. Last time you gave $\{card4\_childA\}$ tickets to $\{childA\}$ and $\{card4\_childB\}$ tickets to $\{childB\}$. In this card, that means $\{childA\}$'s expected reward would be $\{card5\_childA\_exp\}$ and $\{childB\}$'s expected reward would be $\{card5\_childB\_exp\}$	
card5b_display	More generally, the fact that $\{childA\}$ and $\{childB\}$ get different rewards per point means that the more tickets you allocate to $\{childA\}$, the more you • increase the expected amount $\{childA\}$ gets relative to $\{childB\}$ by making it more likely that $\{childA\}$ will get the tutoring • increase the total reward amount received by your kids, since $\{childA\}$ gets more rewards per point. This means that, like on the last card, if you would like to maximize the total reward amount received by both your kids, you would give all the tickets to $\{childA\}$. [draw an arrow to the bottom row in which $\{childA\}$ gets 10 tickets and label "highest total reward"]	
card5b_display2	[If the maximum expected rewards of child B are less than the minimum expected rewards of child A] However, unlike the last card, if you would like to give both children as close to the same expected reward as possible, you should allocate 10 tickets to $\{childB\}$ and 0 tickets to $\{childA\}$ [draw arrow to top row in which $\{childB\}$ gets 10 tickets and label "most equal rewards"].	[If the maximum expected rewards of child B are greater than or equal to the minimum expected rewards of child A] However, unlike the last card, if you would like to give both children as close to the same expected reward as possible, you should allocate more tickets to $\{childB\}$ than to $\{childA\}$ [draw an arrow to the top half of the table in which $\{childB\}$ gets more tickets than $\{childA\}$ and label "most equal reward"].
card5b_dispaly4	And, like before, if you would like to maximize $\{childA\}$'s reward, you should allocate all tickets to $\{childA\}$ [draw arrow to the bottom row in which $\{childA\}$ gets 10 tickets and label "highest reward for $\{childA\}$"]. If you would like to maximize $\{childB\}$'s reward, you should allocate all tickets to $\{childB\}$ [draw arrow to the top row in which $\{childB\}$ gets 10 tickets and label "highest reward $\{childB\}$"]. If you would like to give both children an equal opportunity to get tutoring, you should	

	allocate tickets equally; 5 tickets to $\{childA\}$ and 5 tickets to $\{childB\}$ <i>[draw arrow to row in which $\{childA\}$ and $\{childB\}$ each get 5 tickets and label "equal tickets"]</i> .
card5_quest	Do you have any questions? <i>If they have questions answer them before selecting "no" and proceeding.</i>
	So, here are 10 tickets we'll ask you to divide these 10 lottery tickets between your children. One out of the 10 lottery tickets will be randomly selected by you, and the child whose ticket it is will receive one hour of tutoring. If that chosen lottery ticket belongs to " $\{childA\}$ ", he/she will receive tutoring, otherwise, " $\{childB\}$ " will receive tutoring. Thus, the child with a larger allocation of lottery tickets has a higher chance of receiving tutoring.
card5_allocate	Please allocate these 10 lottery tickets across your two children.
card5_childA	Tickets: $\{childA\}$?
card5_childB	Tickets: $\{childB\}$?
card5_fail	<i>[If the sum of the tickets does not equal 10] The number of tickets does NOT equal 10. Go back and correct.</i>
	Why did you allocate $\{childA\}$ - $\{card5\_childA\}$ tickets and $\{childB\}$ - $\{card5\_childB\}$ tickets? ENUMERATOR: <i>[DO NOT PROMPT. Select one/more responses based on parent's answer. Make sure that the parents' explanation is consistent with their allocation. If not, find out what the parent wants to do and go back and adjust their ticket allocation as appropriate].</i> <i>Options</i> <i>1. Prefer $\{childA\}$ to get tutoring</i> <i>2. Prefer $\{childB\}$ to get tutoring</i> <i>3. Want to equalize inputs (give both children an opportunity to get tutoring)</i> <i>4. Want to equalize outcomes (i.e. equalize expected rewards)</i> <i>5. Want to maximize returns (i.e. maximize total expected rewards)</i> <i>6. Other</i> For the first 4 days of the survey, surveyors were only asked to mark if the respondent understood (i.e. that their explanation was consistent with their allocation) as an answer to this question. For the 172 parents who answered on or after day 5, surveyors were shown the instructions and answer options listed above.
card5_check	
card5_other	Other reason:
	<u>Lottery Ticket Selection</u>
	Having made all the allocations, we will now go into the lottery ticket selection. Your allocations for the five cards were: On card 1, you allocated $\{card1\_childA\}$ tickets to $\{childA\}$ and $\{card1\_childB\}$ tickets to $\{childB\}$.
real_pull	

	On card 2, you allocated $\\$(card2_childA)$ tickets to $\\$(childA)$ and $\\$(card2_childB)$ tickets to $\\$(childB)$. On card 3, you allocated $\\$(card3_childA)$ tickets to $\\$(childA)$ and $\\$(card3_childB)$ tickets to $\\$(childB)$. On card 4, you allocated $\\$(card4_childA)$ tickets to $\\$(childA)$ and $\\$(card4_childB)$ tickets to $\\$(childB)$. On card 5, you allocated $\\$(card5_childA)$ tickets to $\\$(childA)$ and $\\$(card5_childB)$ tickets to $\\$(childB)$.				
	Like we discussed earlier, the computer will randomly assign 1 out of these 5 cards to you: the surveyor does not know the number. For that card, based on your ticket allocations, we'll write your children's names on these lottery tickets, and place all the tickets in this box <i>[show box]</i>. We will then ask you to pick a lottery ticket.				
real_note2	Do you have any questions? <i>If they have questions answer them before proceeding.</i>				
real_1_pulled	<i>[If random number < 0.2]</i> Now that we have our card let's select which child will get the tutoring. Just a reminder you allocated your tickets as follows for Card 1: $\\$(card1_childA)$ tickets to $\\$(childA)$ and $\\$(card1_childB)$ tickets to $\\$(childB)$	<i>[If random number >= 0.2 and < 0.4]</i> Now that we have our card let's select which child will get the tutoring. Just a reminder you allocated your tickets as follows for Card 2: $\\$(card2_childA)$ tickets to $\\$(childA)$ and $\\$(card2_childB)$ tickets to $\\$(childB)$	<i>[If random number >= 0.4 and < 0.6]</i> Now that we have our card let's select which child will get the tutoring. Just a reminder you allocated your tickets as follows for Card 3: $\\$(card3_childA)$ tickets to $\\$(childA)$ and $\\$(card3_childB)$ tickets to $\\$(childB)$	<i>[If random number >= 0.6 and < 0.8]</i> Now that we have our card let's select which child will get the tutoring. Just a reminder you allocated your tickets as follows for Card 4: $\\$(card4_childA)$ tickets to $\\$(childA)$ and $\\$(card4_childB)$ tickets to $\\$(childB)$	<i>[If random number >= 0.8]</i> Now that we have our card let's select which child will get the tutoring. Just a reminder you allocated your tickets as follows for Card 5: $\\$(card5_childA)$ tickets to $\\$(childA)$ and $\\$(card5_childB)$ tickets to $\\$(childB)$
lottery	<i>At this point, the surveyor conducted the ticket lottery. They pulled out 10 physical lottery tickets and wrote on each the initials of either $\\$(childA)$ or $\\$(childB)$ so that the total tickets assigned to each child matched the parent's allocation of tickets on the selected card. The surveyor then put the tickets in a hat and asked the parent to blindly draw a ticket out of the hat to select the winner of the tutoring lottery.</i>				
end	[NAME OF CHILD TO BE TUTORED] was selected for tutoring. In a little bit we will call all those children selected for tutoring and	[NAME OF CHILD TO BE TUTORED] was selected for tutoring. In a little bit we will call all those children selected for tutoring and	[NAME OF CHILD TO BE TUTORED] was selected for tutoring. In a little bit we will call all those children selected for tutoring and	[NAME OF CHILD TO BE TUTORED] was selected for tutoring. In a little bit we will call all those children selected for tutoring and	[NAME OF CHILD TO BE TUTORED] was selected for tutoring. In a little bit we will call all those children selected for tutoring and

	they will get one hour of tutoring and then both $\{childA\}$ and $\{childB\}$ will take a math test. Because the computer picked Card 1 $\{childA\}$ will be rewarded 10 MK for every point they score on the test above $\{cutoff\}$ and $\{childB\}$ will be rewarded 10 MK for every point they score on the test above $\{cutoff\}$.	they will get one hour of tutoring and then both $\{childA\}$ and $\{childB\}$ will take a math test. Because the computer picked Card 2 $\{childA\}$ will be rewarded 10 MK for every point they score on the test $\{cutoff\}$ and $\{childB\}$ will be rewarded 100 MK for every point they score on the test above $\{cutoff\}$.	they will get one hour of tutoring and then both $\{childA\}$ and $\{childB\}$ will take a math test. Because the computer picked Card 3 $\{childA\}$ will be rewarded 100 MK for every point they score on the test above $\{cutoff\}$ and $\{childB\}$ will be rewarded 10 MK for every point they score on the test above $\{cutoff\}$.	they will get one hour of tutoring and then both $\{childA\}$ and $\{childB\}$ will take a math test. Because the computer picked Card 4 $\{childA\}$ will be rewarded 10 MK for every point they score on the test above $\{cutoff\}$ and $\{childB\}$ will be rewarded 10 MK for every point they score on the test above $\{cutoff\}$ plus an additional 500 MK.	they will get one hour of tutoring and then both $\{childA\}$ and $\{childB\}$ will take a math test. Because the computer picked Card 5 $\{childA\}$ will be rewarded 10 MK for every point they score on the test above $\{cutoff\}$ and $\{childB\}$ will be rewarded 100 MK for every point they score on the test above $\{cutoff\}$ plus an additional 500 MK.
end2	On top of that, we also want to give both $\{childA\}$ and $\{childB\}$ an extra 300 MWK irrespective of their score to thank them for their participation. The extra 300 MWK will be delivered along with the rest of the reward. You are welcome to stay until the end of activities today but it is not required. You may leave at any time. Each child will receive a certificate after the test and be given their reward directly.				

Figure 1. Table Visual Aid Examples from Practice Card A:

a. Table Shown in CTO

Tickets to \$(childA)	\$(childA)'s Expected Reward	Tickets to \$(childB)	\$(childB)'s Expected Reward
0	100	10	2000
1	120	9	1950
2	140	8	1900
3	160	7	1850
4	180	6	1800
5	200	5	1750
6	220	4	1700
7	240	3	1650
8	260	2	1600
9	280	1	1550
10	300	0	1500

b. Table Visual Aid Template

Tickets to	Expected Reward	Tickets to	Expected Reward
0		10	
1		9	
2		8	
3		7	
4		6	
5		5	
6		4	
7		3	
8		2	
9		1	
10		0	

c. Sample Table Visual Aid Shown to Respondent

Tickets to <u>Grace</u>	<u>Grace's</u> Expected Reward	Tickets to <u>Marumbo</u>	<u>Marumbo's</u> Expected Reward
0	100	10	2000
1	120	9	1950
2	140	8	1900
3	160	7	1850
4	180	6	1800
5	200	5	1750
6	220	4	1700
7	240	3	1650
8	260	2	1600
9	280	1	1550
10	300	0	1500

Notes: Panel a is an example of what appeared to surveyors on their tablets, with all numbers automatically calculated by the CTO software. Panel b is an (English) example of the paper template that we provided to surveyors, and Panel c is a sample of what the visual aid would have looked like filled in.

Figure 2. Score Table Visual Aid Examples

a. Score Table Template

	Score without tutoring	Score with tutoring	Higher scoring	Higher gains from tutoring
<u>child A</u>				
<u>child B</u>				

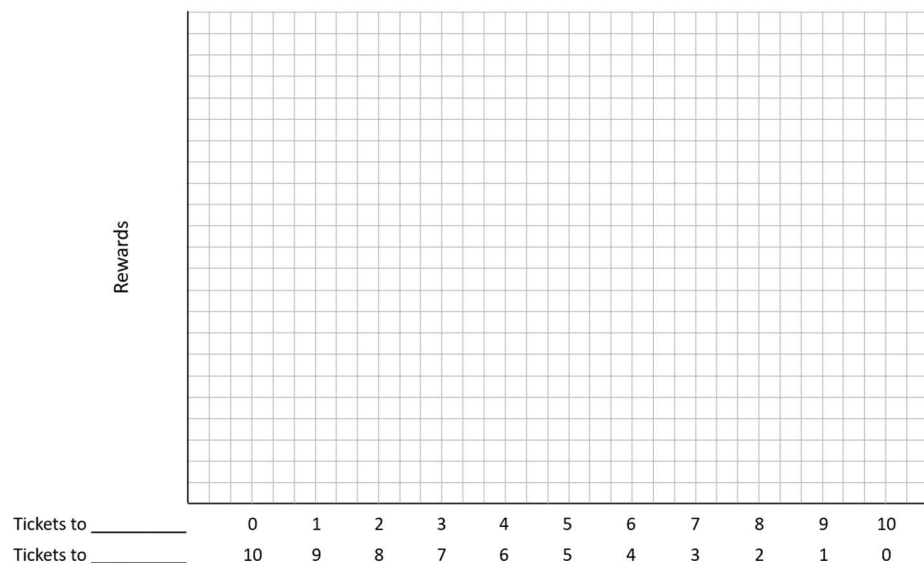
b. Sample Score Table Visual Aid Shown to Respondent

	Score without tutoring	Score with tutoring	Higher scoring	Higher gains from tutoring
<u>Grace</u> child A	50	70		X
<u>Marumbo</u> child B	70	80	X	

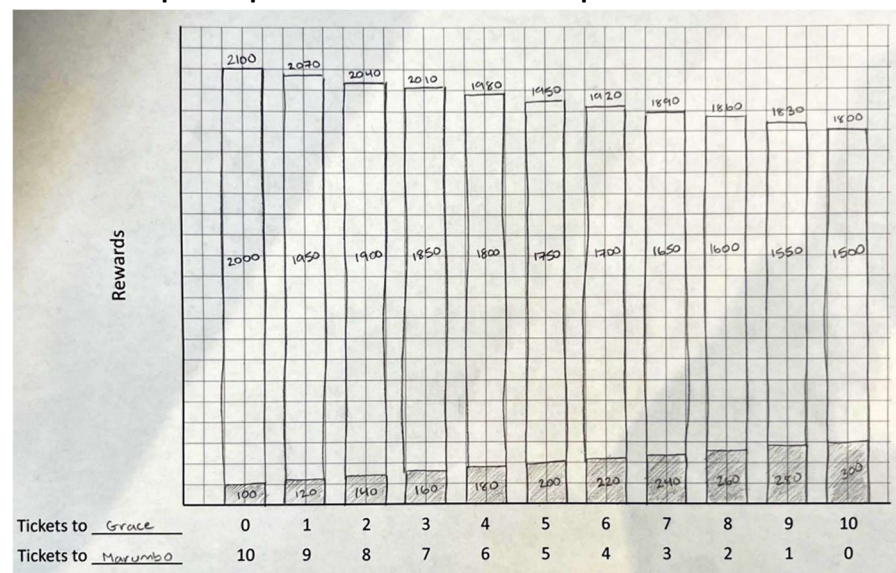
Notes: Panel a is an (English) example of the paper template provided to surveyors, and Panel b is a sample of what the score table visual aid would have looked like filled in.

Figure 3. Graph Visual Aid Examples:

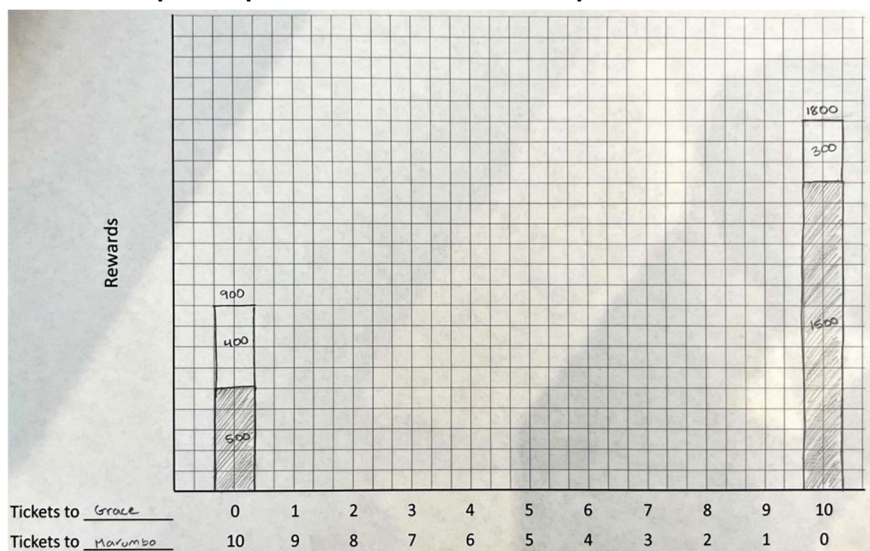
a. Graph Visual Aid Template



b. Sample Graph Visual Aid Shown to Respondent: Practice Card A



c. Sample Graph Visual Aid Shown to Respondent: All Other Cards



Notes: Panel a is an example of the bar chart template that surveyors used. Panels b and c are examples of what the completed graphs may have looked like for the first practice scenario and for all other scenarios, respectively.

Eliciting Beliefs on Scores – Lower-income

Experiment

Summary and description of test: Today we're going to ask each of your children to take a test. The test will be a 30-minute exam designed for students in their grade level. The exam will only cover **math**. The test will be multiple choice questions that are drawn from the curricula that your children covered last year in school. The test is designed to be at the same level as the math curricula used in your child's school last year, so your child's expected score should be similar to math tests administered in their schools last year. Just like the scores reported by your children's schools, the scores for the test today will be given on a scale of 0-100. They would also receive a grade that those scores correspond to. In most schools in Malawi, the highest grade, 4 or "Excellent" is for scores 80-100, then Good (grade 3) is 60-80, Average (grade 2) is 40-60, and Needs Support/Failing (Grade 1) is 0-40. "

16.1. Who do you expect to score better on the test?	☐ 1. REFERENCE CHILD 1 ☐ 2. REFERENCE CHILD 2 ☐ 3. The same
16.2. Specifically, what math score do you think (REFERENCE CHILD 1) will get? <i>(RA: Show parent the Scores Visual Aid so they can point.)</i>	__ __ __
16.3. Specifically, what math score do you think (REFERENCE CHILD 2) will get? <i>(RA: Show parent the Scores Visual Aid so they can point.)</i> <i>(RA: Check whether the answers to 16.2 and 16.3 are consistent with 1. If not please probe and adjust as needed.)</i>	__ __ __
16.4. How certain are you about each of these scores? <i>(RA: Show parent the Visual Aid so they can point to a score between 0-10, with 0 indicating 'no idea', and 10 indicating 'very certain'.)</i>	REFERENCE CHILD 1: __ __ REFERENCE CHILD 2: __ __

Now you'll be given a chance to enter each of your children into a lottery where the winner receives a free tutoring class before the test. The tutoring class would be a 60-minute tutoring class covering only math. The tutoring class would review material similar to what will be covered on the test. It is designed

particularly to help your child do better on this specific test. It will be held in a class with 10 other children in the same grade. The tutor will only go through the material that will be covered on **today's** test [RA: Show parent the cover page of the test].

16.5. Do you think this tutoring would help improve your children's math score on the test?	☐ 1. Yes ☐ 2. No
16.6. If not, why?	
16.7. Whose score do you think would improve more if they received the tutoring?	☐ 1. REFERENCE CHILD 1 ☐ 2. REFERENCE CHILD 2 ☐ 3. SAME
16.8. Why?	

Score improvements for tutoring: How much do you think each of your children's scores would improve after having tutoring? If you don't know, please just take your best guess.

16.9. Specifically, you said before that (REFERENCE CHILD 1) would get score <ANSWER TO 16.2> <i>without tutoring</i> . How much do you think their score would increase because of tutoring?	__ __ __
16.10. Specifically, you said before that (REFERENCE CHILD 2) would get score <ANSWER TO 5.3> <i>without tutoring</i> . How much do you think their score would increase because of tutoring? (RA: Check whether the answers to 16.9 and 16.10 are consistent with the answer to 16.7. If not, please probe and adjust as needed.)	__ __ __
16.11. How certain are you about each of these answers? (RA: Show parent the Visual Aid so they can point to a score between 0-10, with 0 indicating 'no idea', and 10 indicating 'very certain'.)	REFERENCE CHILD 1: __ __ REFERENCE CHILD 2: __ __

Surveyor Protocol for Student Instructions – Lower-income Experiment

1. Before the tutoring begins:

Instruct students that:

- All students are going to take a math test that is appropriate for their grade level
- Before the test, half of the students are going to receive one hour of tutoring focused on material that will be covered on the test
 - Which children are receiving tutoring was decided by a lottery
 - The test will happen immediately after the tutoring

Do not instruct students:

- Details about how the lottery for tutoring works or that their parents played a role
- That they will be receiving payments after the test

2. Before passing out the payments:

Instruct students that:

- They are receiving payments that depend on their test scores as well as some random-ness
- Their payment will be handed to them individually in individual envelopes

Script for Higher-income Experiment

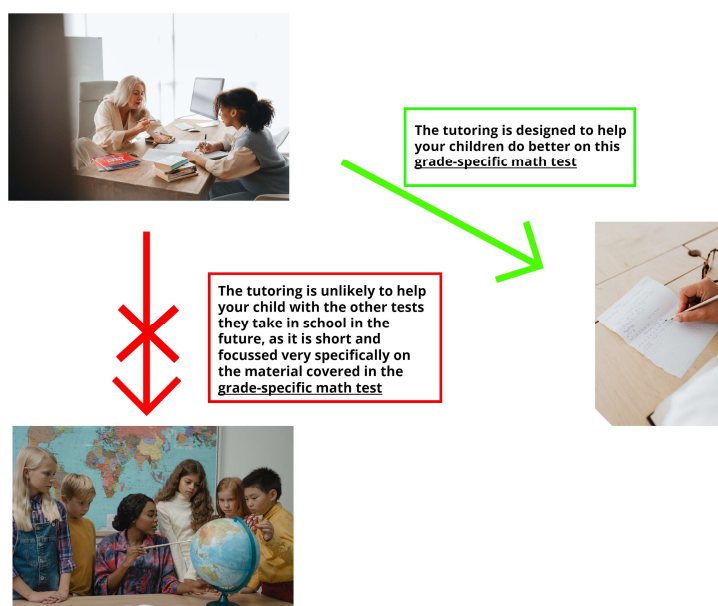
The higher-income experiment was programmed in Qualtrics and participants were recruited online using the online platform Prolific. Once recruited, they were re-directed to our survey. Prior to the experimental script shown here, participants were asked questions to ascertain information such as the age and current grade of their children.

1. Obtaining beliefs about gains from tutoring

Imagine that both your children attend a school program in which they receive money based on their math test scores. In particular, they will take a standardized math test (worth 100 points) for students in their current grade level and receive payments based on how well they do. They'll each be paid \$1 per point they score on the test. Imagine that one of your children did better on the test and so earned \$10 more than the other. What would you do? You could:

- ☐ Leave each child with his/her own earnings – it's their money and they earned it
- ☐ Redistribute – it's more fair for each child to have the same amount

Now suppose that, before the test, both of your children's schools offer 1 free hour of tutoring designed to help students do well on the grade-specific math test. The tutoring is designed to help your children do better on the test, but is unlikely to help them on other tests they take in school in the future. This is because the tutoring is short and focused very specifically on the material in the grade-specific math test.



Which of your children's test scores do you think would *improve* more as a result of the tutoring? Note that we are not asking which child would get a higher score *after* tutoring, but rather which would experience a higher *gain* in test scores as a result of receiving tutoring.

- ☐ Younger child
- ☐ Older child
- ☐ They would improve exactly the same

You said before that your younger child would get score [answer obtained earlier in survey] *without tutoring*. How much do you think their score would *increase* because of tutoring? Note that we are not asking about their final score, but rather how much it would improve.

- ☐ Select number in [0, 100 - belief about younger score without tutoring]

You said before that your older child would get score [answer obtained earlier in survey] *without tutoring*. How much do you think their score would *increase* because of tutoring? Note that we are not asking about their final score, but rather how much it would improve.

- ☐ Select number in [0, 100 - belief about older score without tutoring]

<Prompts and opportunity to change answers if numeric entry is inconsistent to multiple choice answer for example: Woops, there seems to be an error! You said that you thought your younger child would improve by more than your older child as a result of tutoring. However, the scores you entered do not reflect this. Please use the back buttons to go back and change your answers!>

2. Description of experiment

Now imagine a situation where your children's schools are paying each of your children for their performance on a standardized math test (worth 100 points). **The schools would pay each of your children \$1 for each point they score above [threshold].** For example, if one child got a score of [threshold + 1] the school would give them \$1. The school would deliver the payments directly to each child.

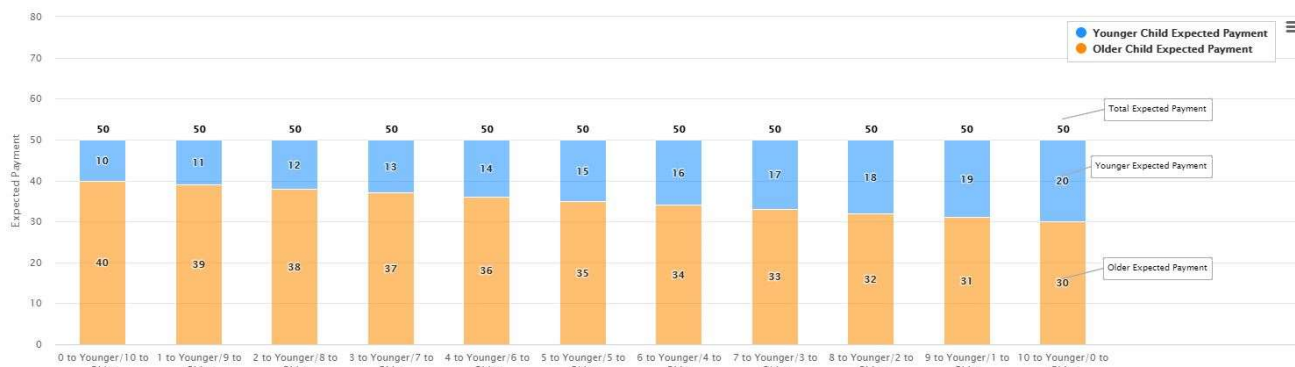
Suppose that the school offers free tutoring to help students do well on the test. But the school can offer tutoring to only one child in each household. You can choose which of your children will receive tutoring in the following way:

1. The school gives you ten lottery tickets to distribute between your children.
2. One of the tickets will be the winning ticket
3. The school will offer tutoring to the child assigned the winning ticket

If you want to ensure that one of your children receives tutoring, you could assign all ten tickets to them. But if you want both of your children to have some chance of winning, you can distribute the

tickets in the way you see fit. Your children will not know the way tutoring was assigned or whether you played any role in it. They will only be told who got the tutoring and that it was allocated by lottery.

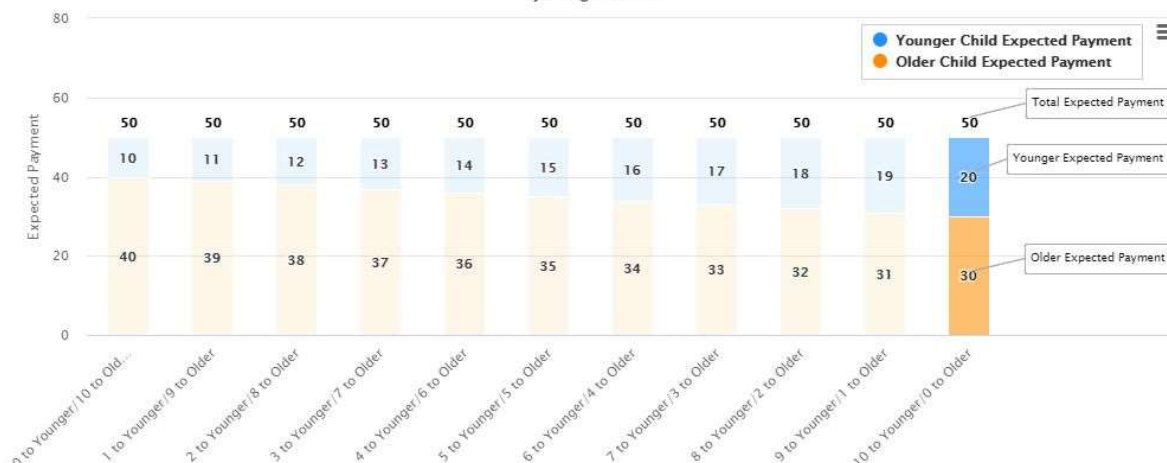
We will now show you some tables and graphs that show how each of your children's expected payments would depend on how you allocate lottery tickets.



Tickets to each child	0 to Younger / 10 to Older	1 to Younger / 9 to Older	2 to Younger / 8 to Older	3 to Younger / 7 to Older	4 to Younger / 6 to Older	5 to Younger / 5 to Older	6 to Younger / 4 to Older	7 to Younger / 3 to Older	8 to Younger / 2 to Older	9 to Younger / 1 to Older	10 to Younger / 0 to Older
Younger child expected payment	10	11	12	13	14	15	16	17	18	19	20
Older child expected payment	40	39	38	37	36	35	34	33	32	31	30
Total expected payment	50	50	50	50	50	50	50	50	50	50	50

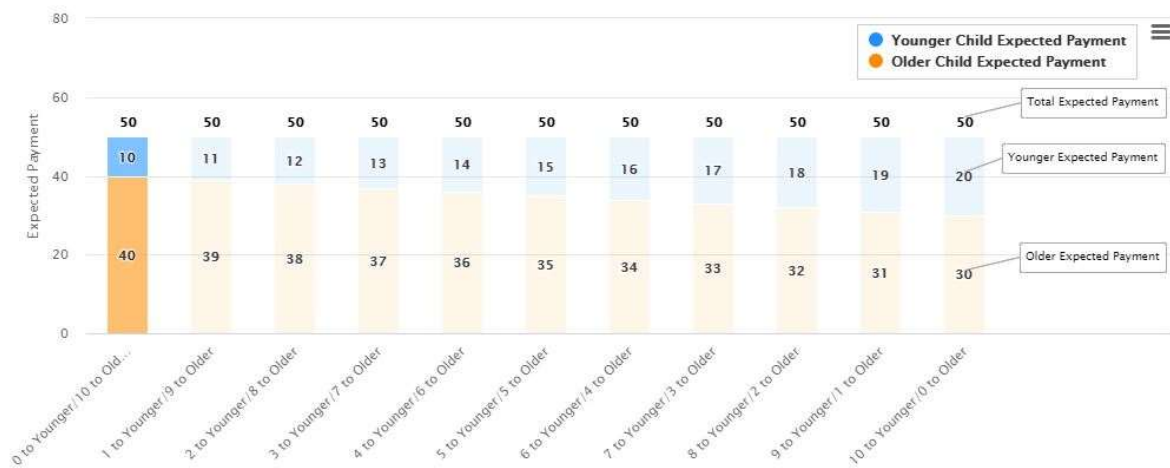
If you would like to maximize your younger child's reward and ensure they get tutoring, you should allocate all tickets to your younger child.

If you would like to maximize your younger child's reward and ensure they get tutoring, you should allocate all tickets to your younger child.



We calculate each child's expected payments by using your beliefs about how well you thought each child would perform on the test, with and without tutoring. If you believe that tutoring will increase your children's test scores, then tutoring will also increase your children's payments, since higher test scores mean higher payments. Each combination of tickets has a different set of expected payments because, for any combination of tickets, each child has a different chance of getting the tutoring, and thus a different chance of getting the higher test score (and higher payment) associated with tutoring. For example, if one child receives 7/10 tickets, they have a 7/10 chance of getting the tutoring.

If you would like to maximize your older child's reward and ensure they get tutoring, you should allocate all tickets to your older child

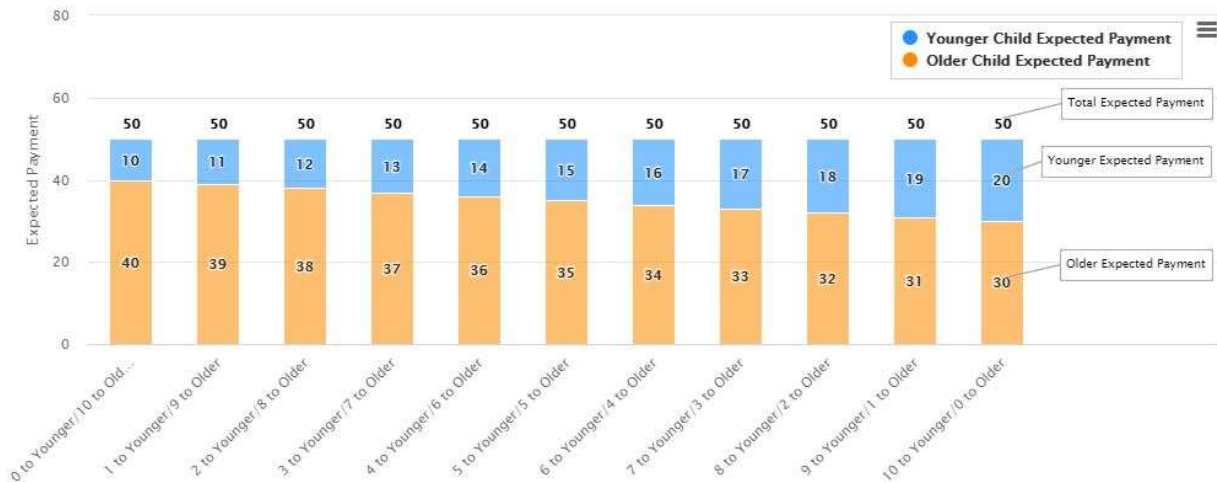


We calculate each child's expected payments by using your beliefs about how well you thought each child would perform on the test, with and without tutoring. If you believe that tutoring will increase your children's test scores, then tutoring will also increase your children's *payments*, since higher test scores mean higher payments. Each combination of tickets has a different set of expected payments because, for any combination of tickets, each child has a different chance of getting the tutoring, and thus a different chance of getting the higher test score (and higher payment) associated with tutoring. For example, if one child receives 7/10 tickets, they have a 7/10 chance of getting the tutoring.

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If returns to tutoring is not equal for both children: If you want to maximize the total reward received by your younger and older child combined, you would give the tutoring to [Child with higher returns to tutoring]. This is because you indicated that tutoring would improve [Child with higher returns to tutoring]'s test score by more than it would improve [Other child's]. To do that, you would allocate all the tickets to [Child with the higher returns to tutoring]

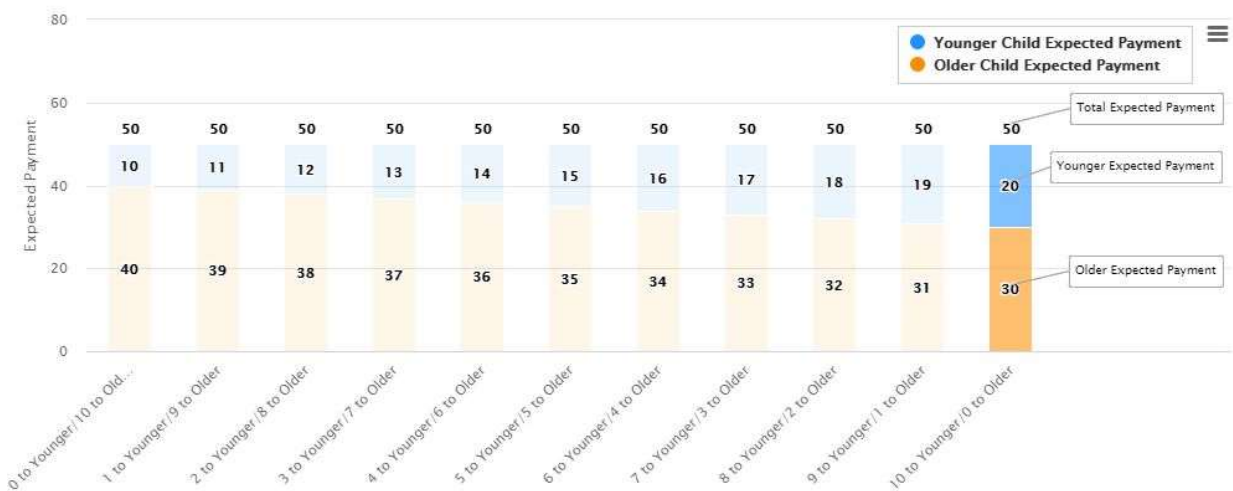
If returns to tutoring is not equal for both children: If you want to maximize the total reward received by your older and younger child combined, it wouldn't matter how you allocate the tickets. This is because you indicated that tutoring would improve both their test scores by the same amount. That means that their combined test scores would also increase by the same amount regardless of who received tutoring.



We calculate each child's expected payments by using your beliefs about how well you thought each child would perform on the test, with and without tutoring. If you believe that tutoring will increase your children's test scores, then tutoring will also increase your children's *payments*, since higher test scores mean higher payments. Each combination of tickets has a different set of expected payments because, for any combination of tickets, each child has a different chance of getting the tutoring, and thus a different chance of getting the higher test score (and higher payment) associated with tutoring. For example, if one child receives 7/10 tickets, they have a 7/10 chance of getting the tutoring.

Highcharts.com

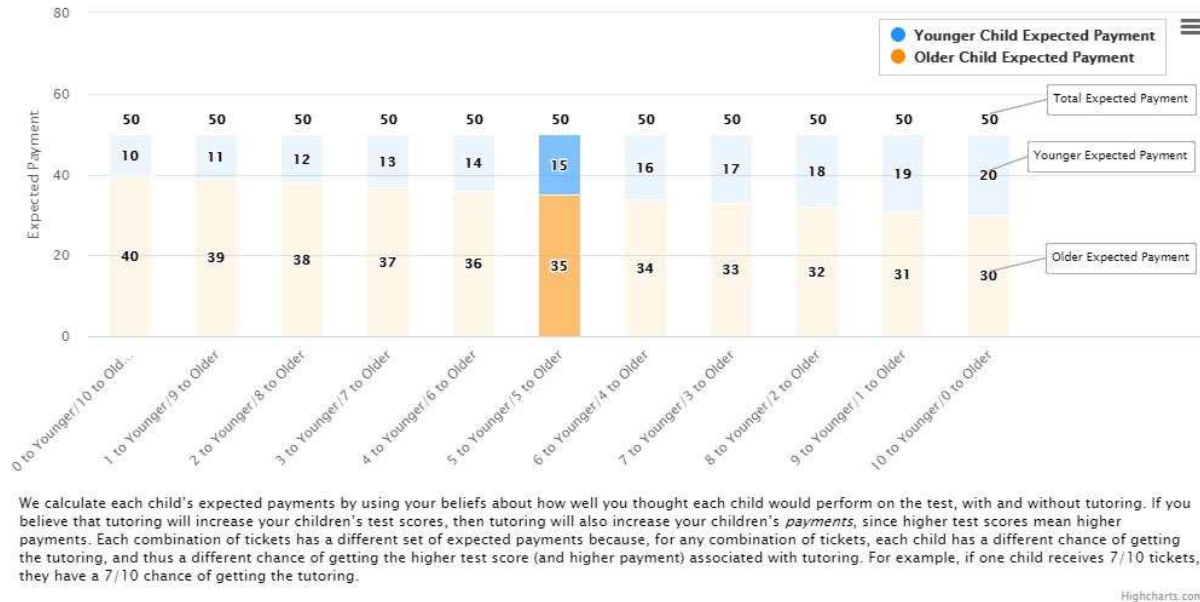
If you want to minimize the difference in payment received by your younger and older child, you should choose the ticket allocation displayed below. This is because the difference in payments is lowest at this ticket allocation.



We calculate each child's expected payments by using your beliefs about how well you thought each child would perform on the test, with and without tutoring. If you believe that tutoring will increase your children's test scores, then tutoring will also increase your children's *payments*, since higher test scores mean higher payments. Each combination of tickets has a different set of expected payments because, for any combination of tickets, each child has a different chance of getting the tutoring, and thus a different chance of getting the higher test score (and higher payment) associated with tutoring. For example, if one child receives 7/10 tickets, they have a 7/10 chance of getting the tutoring.

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If you would like to give both children an equal opportunity to get tutoring, you should allocate tickets equally; 5 tickets to your younger child and 5 tickets to your older



4. Verifying respondent understanding

Let's check to see if the instructions were clear...

How would you allocate your tickets if you would definitely like to give the tutoring to your younger child?

☐ Choose an allocation between 0L/10H – 10L/0H

If answered correctly: That's right! If you wanted to definitely give tutoring to younger child, you would allocate all the tickets to the younger child.

If answered incorrectly: Remember, the number of tickets you allocate to each child determines that child's chance of getting tutoring. If you definitely want give tutoring to your younger child, you would allocate all 10 tickets to your younger child and 0 to your older child.

Here's another question to check your understanding. How would you allocate your tickets if you would like to definitely give the tutoring to your older child?

☐ Choose an allocation between 0L/10H – 10L/0H

If answered correctly: That's right! If you wanted to definitely give tutoring to older child, you would allocate all the tickets to the older child.

If answered incorrectly: Remember, the number of tickets you allocate to each child determines that child's chance of getting tutoring. If you definitely want give tutoring to your older child, you would allocate all 10 tickets to your older child and 0 to your younger child.

Attention check 1: What will your child receive if they win the lottery?

- ☐ Pens and Books
- ☐ Music Lessons
- ☐ 1 hour tutoring
- ☐ 10 hour tutoring

Attention check 2: What type of test will your children be taking?

- ☐ Exactly the same math test
- ☐ A grade-specific math test

5. Experiment

5.1 Scenario 1 (Base Case)

Now let's find out what you'd actually do with your own children. Remember:

1. Your children's schools are paying each of your children \$1 per point above [threshold] that they scored on a test.
2. The school is offering tutoring to one child.
3. To determine which child gets tutoring, you have ten lottery tickets to distribute between your children.
4. The school will offer tutoring to the child assigned the winning ticket
5. Your children will not know the way tutoring was assigned or whether you played any role in it. They will only be told who got the tutoring and that it was allocated by lottery

How would you assign the tickets?

- ☐ Choose an allocation between 0L/10H – 10L/0H

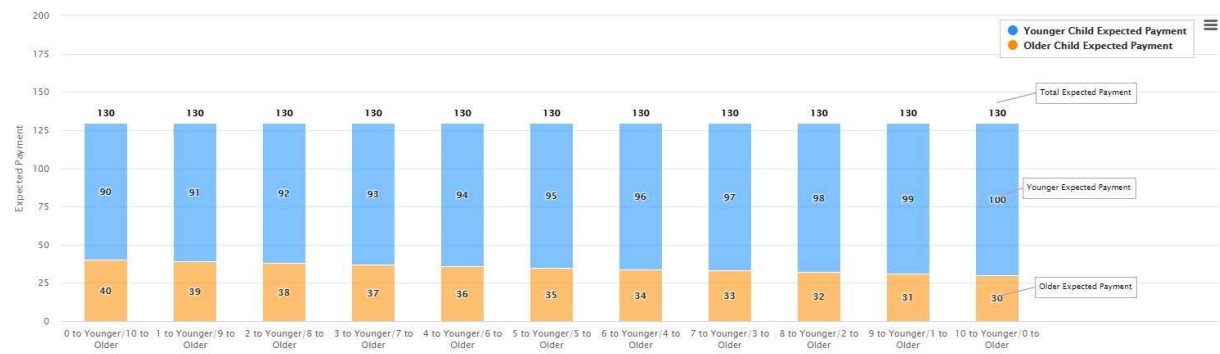
5.2 Scenario 2 (Lump Sum)

Now imagine a similar situation. Just like in the previous question, your children's schools are paying each of your children \$1 per point above [threshold] that they score on a standardized math test.

- **However, the difference from the previous question is that now [low ability child] will also get an extra \$80 regardless of their score.** [Higher ability child] will not receive any additional payment besides the \$1 per point.
- Everything else is the same as the previous question.
- Again, the school is offering free tutoring to one child in each household. You can choose which of your children will receive tutoring by allocating 10 lottery tickets.

Again, the school is offering free tutoring to one child in each household. You can choose which of your children will receive tutoring by allocating 10 lottery tickets.

If you would like to maximize your younger child’s payment and ensure they get tutoring, you should allocate all tickets to your younger child.

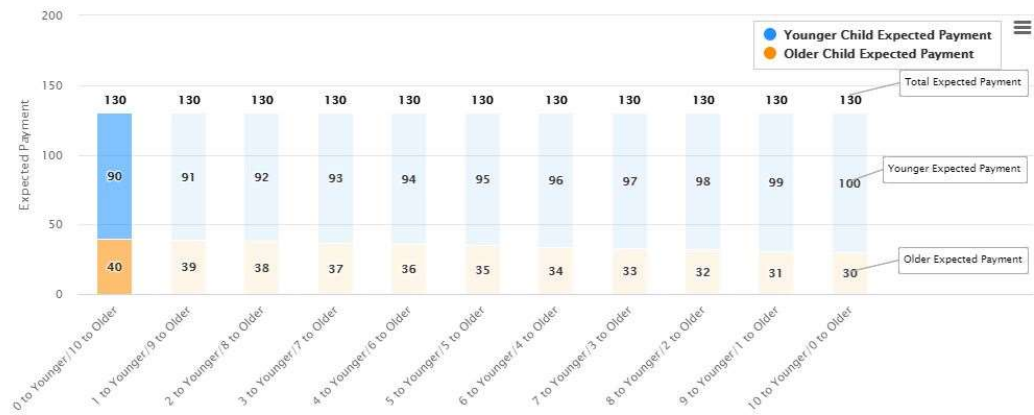


We calculate each child's expected payments by using your beliefs about how well you thought each child would perform on the test, with and without tutoring. If you believe that tutoring will increase your children's test scores, then tutoring will also increase your children's payments, since higher test scores mean higher payments. Each combination of tickets has a different set of expected payments because, for any combination of tickets, each child has a different chance of getting the tutoring, and thus a different chance of getting the higher test score (and higher payment) associated with tutoring. For example, if one child receives 7/10 tickets, they have a 7/10 chance of getting the tutoring.

Highcharts.com

Tickets to each child	0 to Younger / 10 to Older	1 to Younger / 9 to Older	2 to Younger / 8 to Older	3 to Younger / 7 to Older	4 to Younger / 6 to Older	5 to Younger / 5 to Older	6 to Younger / 4 to Older	7 to Younger / 3 to Older	8 to Younger / 2 to Older	9 to Younger / 1 to Older	10 to Younger / 0 to Older
Younger child expected payment	90	91	92	93	94	95	96	97	98	99	100
Older child expected payment	40	39	38	37	36	35	34	33	32	31	30
Total expected payment	130	130	130	130	130	130	130	130	130	130	130

If you would like to maximize your older child’s reward and ensure they get tutoring, you should allocate all tickets to your older child.



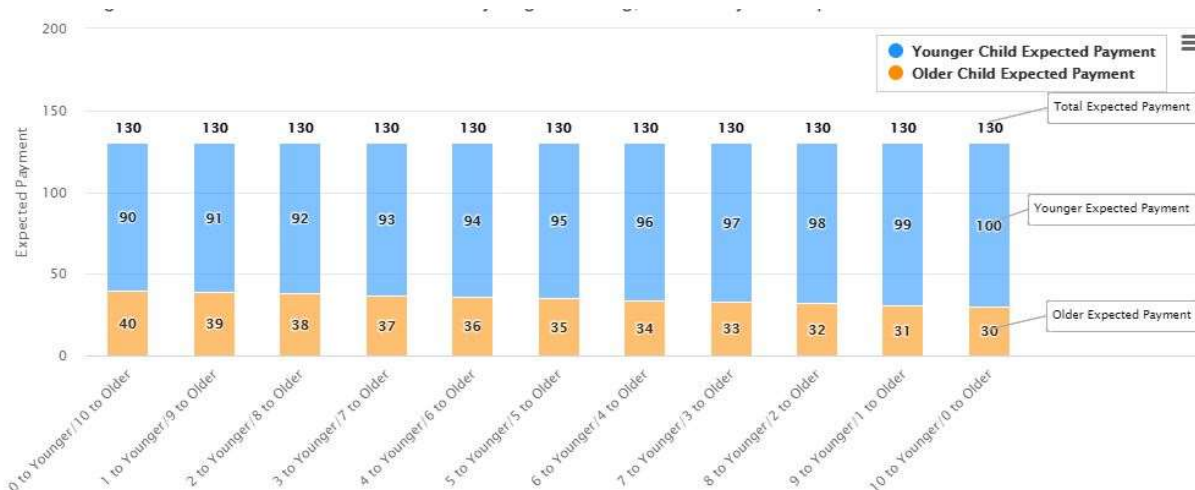
We calculate each child's expected payments by using your beliefs about how well you thought each child would perform on the test, with and without tutoring. If you believe that tutoring will increase your children's test scores, then tutoring will also increase your children's payments, since higher test scores mean higher payments. Each combination of tickets has a different set of expected payments because, for any combination of tickets, each child has a different chance of getting the tutoring, and thus a different chance of getting the higher test score (and higher payment) associated with tutoring. For example, if one child receives 7/10 tickets, they have a 7/10 chance of getting the tutoring.

Highcharts.com

If returns to tutoring is not equal for both children: If you want to maximize the total reward received by your younger and older child combined, you would give the tutoring to [Child with higher returns to

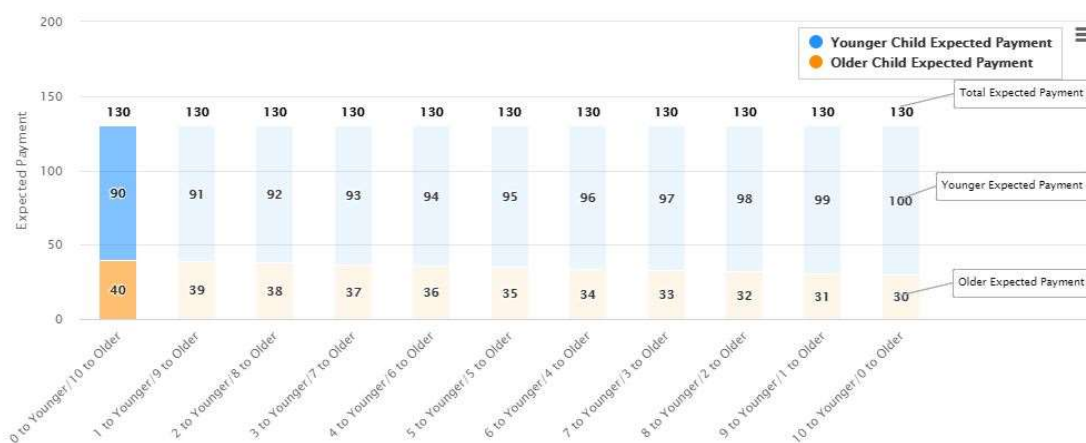
tutoring]. This is because you indicated that tutoring would improve [Child with higher returns to tutoring]’s test score by more than it would improve [Other child’s].

If returns to tutoring is equal for both children: If you would like to maximize the total reward received by your younger and older children combined, it wouldn’t matter how you allocate the tickets. This is because you indicated that tutoring would improve both their test scores by the same amount. That means that their combined test scores would also increase by the same amount regardless of who received tutoring.



We calculate each child’s expected payments by using your beliefs about how well you thought each child would perform on the test, with and without tutoring. If you believe that tutoring will increase your children’s test scores, then tutoring will also increase your children’s *payments*, since higher test scores mean higher payments. Each combination of tickets has a different set of expected payments because, for any combination of tickets, each child has a different chance of getting the tutoring, and thus a different chance of getting the higher test score (and higher payment) associated with tutoring. For example, if one child receives 7/10 tickets, they have a 7/10 chance of getting the tutoring.

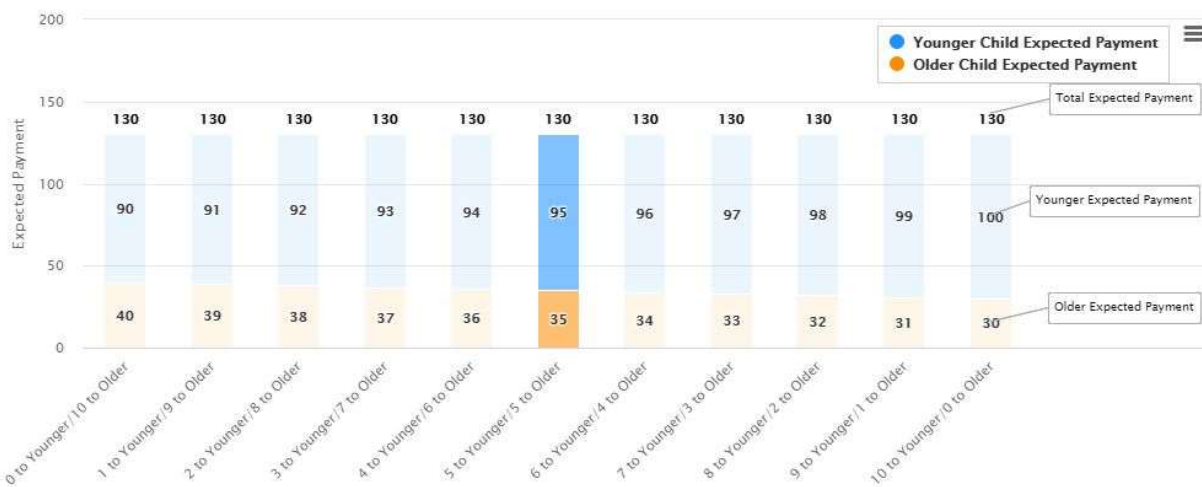
If you want to minimize the difference in payment received by your younger and older child, you should choose the ticket allocation displayed below. This is because the difference in payments is lowest at this ticket allocation.



We calculate each child’s expected payments by using your beliefs about how well you thought each child would perform on the test, with and without tutoring. If you believe that tutoring will increase your children’s test scores, then tutoring will also increase your children’s *payments*, since higher test scores mean higher payments. Each combination of tickets has a different set of expected payments because, for any combination of tickets, each child has a different chance of getting the tutoring, and thus a different chance of getting the higher test score (and higher payment) associated with tutoring. For example, if one child receives 7/10 tickets, they have a 7/10 chance of getting the tutoring.

Highcharts.com

If you would like to give both children an equal opportunity to get tutoring, you should allocate tickets equally; 5 tickets to your younger child and 5 tickets to your older



We calculate each child's expected payments by using your beliefs about how well you thought each child would perform on the test, with and without tutoring. If you believe that tutoring will increase your children's test scores, then tutoring will also increase your children's *payments*, since higher test scores mean higher payments. Each combination of tickets has a different set of expected payments because, for any combination of tickets, each child has a different chance of getting the tutoring, and thus a different chance of getting the higher test score (and higher payment) associated with tutoring. For example, if one child receives 7/10 tickets, they have a 7/10 chance of getting the tutoring.

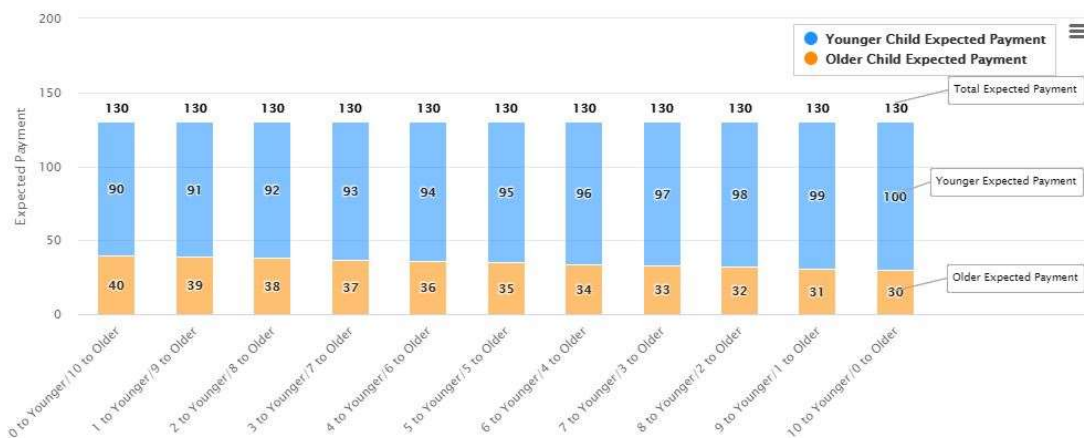
Highcharts.com

How would you assign the tickets in this situation?

☐ Choose an allocation between 0L/10H – 10L/0H

How would you assign the tickets in this situation?

Hover for a reminder about all of the details!



We calculate each child's expected payments by using your beliefs about how well you thought each child would perform on the test, with and without tutoring. If you believe that tutoring will increase your children's test scores, then tutoring will also increase your children's *payments*, since higher test scores mean higher payments. Each combination of tickets has a different set of expected payments because, for any combination of tickets, each child has a different chance of getting the tutoring, and thus a different chance of getting the higher test score (and higher payment) associated with tutoring. For example, if one child receives 7/10 tickets, they have a 7/10 chance of getting the tutoring.

Highcharts.com

Note: For brevity some of the visual aids for scenarios 3, 4 and 5 are not displayed in this experimental script, but their position has been noted.

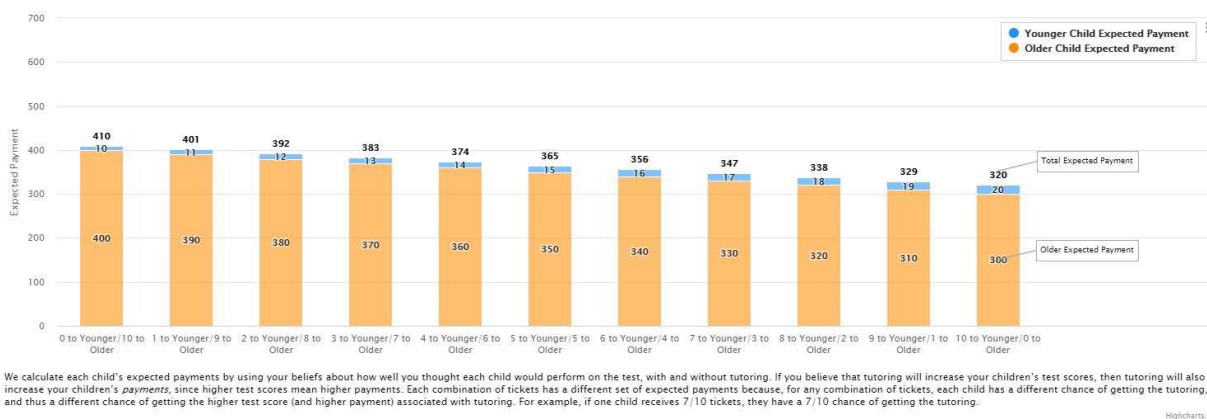
5.3 Scenario 3 (Higher returns to H)

Now imagine a similar situation where your children's schools are paying each of your children for their performance on a standardized math test (worth 100 points). However, they are now paying your two children different amounts per point they score. In particular:

- Your [lower ability child] will receive \$1 per point above [threshold] they score on the test. Your [higher ability child] will instead receive **\$10** per point above [threshold] they score on the test. For example, if they get a score of [threshold+10], the school would give them **\$100**.

Unlike in the previous question, the schools will not pay either child additional payments aside from what they receive as a result of their test scores.

Again, the school is offering free tutoring to one child in each household. You can choose which of your children will receive tutoring by allocating 10 lottery tickets.



Tickets to each child	0 to Younger / 10 to Older	1 to Younger / 9 to Older	2 to Younger / 8 to Older	3 to Younger / 7 to Older	4 to Younger / 6 to Older	5 to Younger / 5 to Older	6 to Younger / 4 to Older	7 to Younger / 3 to Older	8 to Younger / 2 to Older	9 to Younger / 1 to Older	10 to Younger / 0 to Older
Younger child expected payment	10	11	12	13	14	15	16	17	18	19	20
Older child expected payment	400	390	380	370	360	350	340	330	320	310	300
Total expected payment	410	401	392	383	374	365	356	347	338	329	320

If you would like to maximize your younger child's payment/ensure they get tutoring, you should allocate all tickets to your younger child.

<Insert visual aid>

If you would like to maximize your older child's payment and ensure they get tutoring, you should allocate all tickets to your older child

<Insert visual aid>

If you would like to maximize the total payment received by your younger and older child combined, you would give the tutoring to [higher ability child]. This is because children's schools are paying [higher ability child] \$10 per point they score on the math test.

<Insert visual aid>

If you would like to minimize the difference in payment received by your younger and older child, you would give the tutoring to your [low ability child]. This is because children's schools are paying your [high ability child] \$10 per point they score on the math test, but your [low ability child] \$1 per point they score on the math test.

<Insert visual aid>

If you would like to give both children an equal opportunity to receive tutoring, you should allocate tickets equally; 5 tickets to your younger child and 5 tickets to your older

<Insert visual aid>

How would you assign the tickets in this situation?

☐ Choose an allocation between 0L/10H – 10L/0H

5.4 Scenario 4 (Higher returns to Child L and Lump Sum to Child H)

Now, imagine that instead of your [higher ability child] it is your [lower ability child] that gets paid more per point over [threshold] they score. Your [lower ability child] will receive \$10 for every point above [threshold], while your [higher ability child] will receive \$1. Imagine also that your [higher ability child] will also get an extra \$100 irrespective of their score.

Compared to the previous situation, there are a couple of notable differences:

- **Now its [lower ability child] who earns ten times as much** per point as [higher ability child]. This was the opposite in the previous situation.
- However, note that compared to the previous situation, [higher ability child] now earns an additional \$100 irrespective of their score, while [lower ability child] gets no extra payment.

Again, the school is offering free tutoring to one child in each household. You can choose which of your children will receive tutoring by allocating 10 lottery tickets.



We calculate each child's expected payments by using your beliefs about how well you thought each child would perform on the test, with and without tutoring. If you believe that tutoring will increase your children's test scores, then tutoring will also increase your children's payments, since higher test scores mean higher payments. Each combination of tickets has a different set of expected payments because, for any combination of tickets, each child has a different chance of getting the tutoring, and thus a different chance of getting the higher test score (and higher payment) associated with tutoring. For example, if one child receives 7/10 tickets, they have a 7/10 chance of getting the tutoring.

Highcharts.com

Tickets to each child	0 to Younger / 10 to Older	1 to Younger / 9 to Older	2 to Younger / 8 to Older	3 to Younger / 7 to Older	4 to Younger / 6 to Older	5 to Younger / 5 to Older	6 to Younger / 4 to Older	7 to Younger / 3 to Older	8 to Younger / 2 to Older	9 to Younger / 1 to Older	10 to Younger / 0 to Older
Younger child expected payment	100	110	120	130	140	150	160	170	180	190	200
Older child expected payment	540	539	538	537	536	535	534	533	532	531	530
Total expected payment	640	649	658	667	676	685	694	703	712	721	730

If you would like to maximize your younger child's payment/ensure they get tutoring, you should allocate all tickets to your younger child.

<Insert visual aid>

If you would like to maximize your older child's payment/ ensure they get tutoring, you should allocate all tickets to your older child.

<Insert visual aid>

If you would like to maximize the total payment received by your younger and older child combined, you would give the tutoring to [lower ability child]. This is because children's schools are paying [lower ability child] \$10 per point over [threshold] they score on the math test.

If you want to minimize the difference in payment received by your younger and older child, you should choose the ticket allocation displayed below. This is because the difference in payments is lowest at this ticket allocation.

<Insert visual aid>

If you would like to give both children an equal opportunity to receive tutoring, you should allocate tickets equally; 5 tickets to your younger child and 5 tickets to your older

<Insert visual aid>

How would you assign the tickets in this situation?

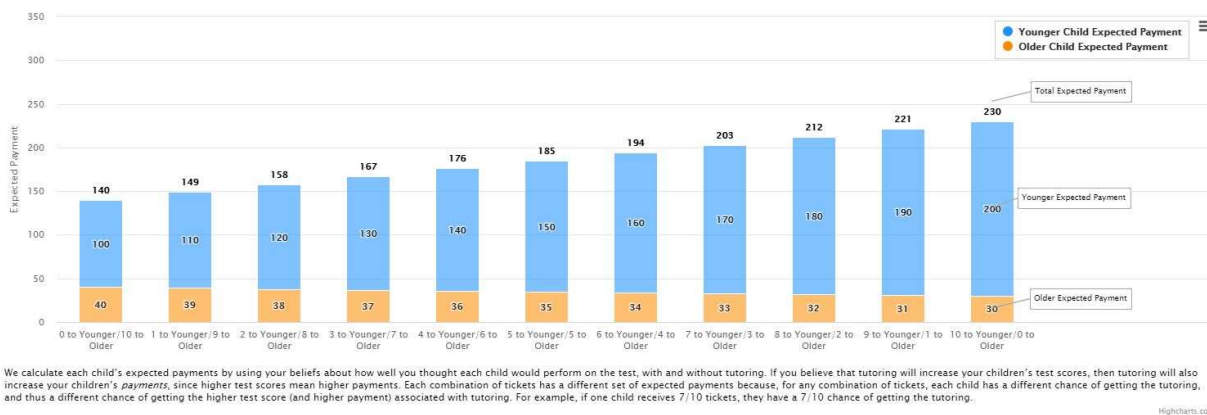
☐ Choose an allocation between 0L/10H – 10L/0H

5.5 Scenario 5 (Higher returns to Child L)

Finally, like the previous scenario, your [lower ability child] will get \$10 per point above [threshold] they score on the test, whereas [higher ability child] will get \$1 in rewards for every point over [threshold]. However, unlike the previous question Child B will **not** get an extra \$100. **Your [lower ability child] still earns ten times as much** per point as [higher ability child].

- However, because your [higher ability child] now does not earn an extra \$100, picking the same ticket allocation as the previous scenario would mean your [lower ability child] would earn the same reward, but your [higher ability child] would earn a reward \$100 less than in the previous scenario.

Again, the school is offering free tutoring to one child in each household. You can choose which of your children will receive tutoring by allocating 10 lottery tickets.



Tickets to each child	0 to Younger / 10 to Older	1 to Younger / 9 to Older	2 to Younger / 8 to Older	3 to Younger / 7 to Older	4 to Younger / 6 to Older	5 to Younger / 5 to Older	6 to Younger / 4 to Older	7 to Younger / 3 to Older	8 to Younger / 2 to Older	9 to Younger / 1 to Older	10 to Younger / 0 to Older
Younger child expected payment	100	110	120	130	140	150	160	170	180	190	200
Older child expected payment	40	39	38	37	36	35	34	33	32	31	30
Total expected payment	140	149	158	167	176	185	194	203	212	221	230

If you would like to maximize your younger child's payment/ensure they get tutoring, you should allocate all tickets to your younger child.

<Insert visual aid>

If you would like to maximize your older child's payment/ ensure they get tutoring, you should allocate all tickets to your older child.

<Insert visual aid>

If you would like to maximize the total payment received by your younger and older child combined, you would give the tutoring to [low ability child]. This is because children's schools are paying [low ability child] \$10 per point over [threshold] they score on the math test.

<Insert visual aid>

If you want to minimize the difference in payment received by your younger and older child, you should choose the ticket allocation displayed below. This is because the difference in payments is lowest at this ticket allocation.

<Insert visual aid>

If you would like to give both children an equal opportunity to receive tutoring, you should allocate tickets equally; 5 tickets to your younger child and 5 tickets to your older.

<Insert visual aid>

How would you assign the tickets in this situation?

☐ Choose an allocation between 0L/10H – 10L/0H

Eliciting Beliefs on Scores – Higher-income Experiment

Suppose both children took a standardized math test for students in their current grade level. The test will only cover math. To clarify, if your older child is in grade 6 and your younger child is in grade 2, then the older child will take a standardized math test designed for children in grade 6, while your younger child will take a standardized math test designed for children in grade 2. Who would you expect to score higher on the math test? The lowest possible score is 0 and the highest possible score is 100. Higher scores imply a better performance.	1. Younger child 2. Older child 3. They would get <i>exactly</i> the same
What score do you think your younger child would get on this math test? Recall that it is out of 100.	0-100
What score do you think your older child would get on this math test? Recall that it is out of 100.	0-100
On a scale of 1-100, how certain are you about the score you gave to your younger child?	0-100
On a scale of 1-100, how certain are you about the score you gave to your older child?	0-100

Stated Preference Module – Both Experiments

Note: The same wording was used in both the lower- and higher-income experiments, the only difference being the monetary amounts. In the scripts below, we present the higher-income monetary amounts with the lower-income monetary amounts in parentheses.

Question 14.2: Imagine a parent has two children, one who is better in school (we'll call this child "child B" for "better in school") than the other (we'll call this child "Child W" for "weaker in school"). Because Child W is weaker at school, Child W's test scores are about 10 score points lower on a 100 point scale than Child B's score.

The parent has \$500 (1000 MWK) to spend on child B and child W's education this year. The parent thinks that, for each \$50 (100 MWK) spent on either child's education, that child's test score will increase by about 1 score point at the end of the school year. This means that:

- If the parent spent all \$500 (1000 MWK) on Child B, Child B's test score would increase by 10 score points;
 - If the parent spent all on Child W, child W's test score would increase by 10 score points
 - If the parent split the money and spent \$250 (500 MWK) in each child, both children's test scores would increase by 5 score points.
1. "Equal spending": Spend the same amount on each child (\$250/500MWK on each child) to give both children the same opportunities, even if that means they will perform differently.
 2. "Equal test scores": Spend all \$500 (1000 MWK) on Child W to give Child W as high a test score as Child B, even though that means they will receive unequal amounts.

Which of these two options would you choose if you were the parent?

Question 14.3a: Let's say a parent has two children. One of their children is more able at school than the other. The parent thinks that child's natural abilities also mean the child will likely have a more successful and lucrative career as an adult. The parent has a limited education budget and has to figure out how to spend it. The parent thinks that spending it on the higher-ability child would have a bigger impact on that child's future success and earnings than spending on the lower-ability child. However, this would increase the inequalities between the children's earnings in adulthood. The parent has three options for how they can allocate their limited education budget across their children:

- a. Spend more on the higher-ability child: Spend the money where it will yield the highest gains in terms of future success and earnings.
- b. Spend equally on both children: Give both an equal shot
- c. Spend more on the lower-ability child: Try to help them achieve future success and earnings that are similar to their sibling's

What would be your first choice?

Question 14.3b: Let's say a parent has two children. One of their children is more able at school than the other. The parent thinks that child's natural abilities also mean the child will do better on the final exam.

The parent has a limited education budget and has to figure out how to spend it. The parent thinks that spending it on the higher-ability child would have a bigger impact on that child's test scores than spending on the lower-ability child. However, this would increase the inequalities between their test scores.

The parent has three options for how they can allocate their limited education budget across their children:

The parent has three options for how they can allocate their limited education budget across their children:

- a. Spend more on the higher-ability child: Spend the money where it will yield the highest gains in terms of test scores.
- b. Spend equally on both children: Give both an equal shot
- c. Spend more on the lower-ability child: Try to help them achieve test scores that are similar to their sibling's.

What would be your first choice?

Questions 14.3c, 14.3d: What would be your second choice?

Question 14.4: Let's say you have \$500 (1000 MWK) for educational investment across your two oldest children. Let's assume one more able at school than the other: How would you allocate \$500 (1000 MWK) across these two children:

- a. Spend more on the higher-ability child
- b. Spend equally on both children
- c. Spend more on the lower-ability child

Question 14.5: Let's say you have \$500 (1000 MWK) for educational investment across someone else's two children. Let's assume one child is more able at school than the other: How would you allocate \$500 (1000 MWK) across the two children:

- a. Spend more on the higher-ability child
- b. Spend equally on both children
- c. Spend more on the lower-ability child

Question 14.6: Let's say your local government has \$500 (1000 MWK) for educational investment across two children from two different households. Let's assume one child is more able at school than the other: How should the local government allocate \$500 (1000 MWK) across the two children:

- a. Spend more on the higher-ability child

- b. Spend equally on both children
- c. Spend more on the lower-ability child

Question 14.7: Now, let's say there are two poor households that each have small businesses that need investment to grow. The local government has \$10,000 (50000 MWK) to invest in one or both of these businesses.

Household 1 is poorer, and this household's business will make a small amount of money from the investment.

Household 2 is less poor than Household 1, and this household's business will make more money from the investment.

How should the government invest?

- a. Invest in the poorer household's low-return business.
- b. Invest equally in both businesses.
- c. Invest in the second, less-poor household's high-return business.