

# Online Appendix 3 to "Narrow Bracketing and Dominated Choices": Complete instructions of laboratory and survey experiments

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**Laboratory experiments:** The reader is advised to first read the summary in Online Appendix 1, which details the sequence of tasks and describes the content of sessions 1 through 15. The following instructions of the laboratory experiments follows the session order and names introduced there. In particular, Online Appendix 1 details how the 15 correspond to the four laboratory treatments.

All pages were handed out separately during the sessions.

## **Sessions 1,2:**

Welcome to this experiment! As you know, you have already earned a participation fee. The decisions you make will also influence your earnings. Please do not communicate with the other participants in the experiment. If you have a question, please raise your hand, and the experimenter will come to you and answer it in private. If you stick to these rules, you will be paid in cash, after the experiment.

Please indicate your code number on the top of this sheet, and also on all other sheets that you will receive. This is important to identify your earnings correctly, and protects your personal anonymity.

For some of the decisions you make, there will be coin flips that also influence your earnings. They will be carried out after the experiment, when you collect your earnings. Each participant will observe the coin flips that are relevant for him or her, and all probability numbers included below are meant to represent independent chance moves. In other words, for every lottery that is described below, there will be separate coin flips, and each participant will get a separate set of coin flips.

For example, if a lottery contains a 50% chance to win and a 50% chance to lose, a single coin flip will be made, and you will win if Heads comes up. If a different lottery contains a chance of

25% to win and a 75% chance to lose, then two coin flips will be made – you win if Heads comes up in both flips, and lose otherwise.

You can have as much time as you want, to make each decision. Please start as soon as the first decision form is handed out to you.

[Page break]

You face the following pair of concurrent decisions. First examine both decisions, then indicate your choices, by circling the corresponding letter. Both choices will be payoff relevant, i.e. the gains and losses will be added to your overall payment.

Decision (i): Choose between

- A. a sure gain of £2.40
- B. a 25% chance to gain £10.00 and a 75% chance to gain £0.00.

Decision (ii): Choose between

- C. a sure loss of £7.50
- D. a 75% chance to lose £10.00, and a 25% chance to lose £0.00.

Remember to include your code number.

[Page break]

[The following page was presented to one third of participants.]

You now have the opportunity to play a gamble that offers a 50% chance to win £4 and a 50% chance to lose £2. The gamble will be payoff relevant, i.e. all gains and losses will be added to your overall payment. Which of the following do you choose?

- A. Play the gamble.
- B. Do not play the gamble.

Remember to include your code number.

[Page break]

[The following page was presented to the second third of participants.]

You now have the opportunity to play a gamble that offers a 50% chance to win £4 and a 50% chance to lose £2.

You can play the gamble several times, not just once. For each gamble that you play, there will

be a separate coin flip. The gambles will be payoff relevant, i.e. all gains and losses will be added to your overall payment.

You will play the gamble [50% chance to win £4 and 50% chance to lose £2] five times, but you do not yet know your wins and losses. Which of the following do you choose?

- A. Play the gamble for the sixth time.
- B. Do not play the gamble for the sixth time.

Remember to include your code number.

[Page break]

[The following page was presented to the last third of participants.]

You now have the opportunity to play a gamble that offers a 50% chance to win £4 and a 50% chance to lose £2.

You can play the gamble several times, not just once. For each gamble that you play [50% chance to win £4 and 50% to lose £2], there will be a separate coin flip. The gambles will be payoff relevant, i.e. all gains and losses will be added to your overall payment. Which of the following do you choose?

- A. Play the gamble six times.
- B. Play the gamble five times.

Remember to include your code number.

[Page break]

The following are some numerical problems. Please answer the questions as well as you can.

First problem: What is 15% of 1,000? \_\_\_\_\_

Second problem: A car rental agency charges \$35 a day plus \$0.14 per mile for its rental cars. If these charges include tax, what is the total cost of travelling 300 miles over 3 days in a car rented from this agency? \_\_\_\_\_ \$42 \_\_\_\_\_ \$105 \_\_\_\_\_ \$125 \_\_\_\_\_ \$147 \_\_\_\_\_ \$300

Third problem: Which of the following is larger than  $\frac{3}{5}$ ? \_\_\_\_\_  $\frac{19}{35}$  \_\_\_\_\_  $\frac{13}{20}$  \_\_\_\_\_  $\frac{4}{7}$  \_\_\_\_\_  $\frac{7}{13}$  \_\_\_\_\_ None of the above

Fourth problem: If it takes 5 people 5 months to save a total of \$5,000, how many months would it take 100 people to save a total of \$100,000? \_\_\_\_\_

Fifth problem: A TV and a radio cost \$110 in total. The TV costs \$100 more than the radio.  
How much does the radio cost? \_\_\_\_\_

Remember to include your code number.

[Page break]

Finally, please fill in the questionnaire below. You can be assured that all information will be stored in a 100% anonymous way, ensuring your privacy. Please respond truthfully, to support us in our research.

Age: \_\_\_\_\_

Sex: \_\_\_\_\_

Main subject of study: \_\_\_\_\_

Year of study: \_\_\_\_\_

Your average monthly budget, including all expenses for food and lodging: \_\_\_\_\_

Do you currently work for money? \_\_\_\_\_

Please indicate your main source of income: \_\_\_\_\_

Nationality: \_\_\_\_\_

In your household, do you live (check all that apply): \_\_\_\_\_ with parents \_\_\_\_\_ alone  
\_\_\_\_\_ with partner \_\_\_\_\_ with children \_\_\_\_\_ none of the aforementioned, but sharing  
an apartment with someone else.

Please indicate your level of mathematics education: Did you receive at least 4 years of mathematics education in before attending university? \_\_\_\_\_yes \_\_\_\_\_no

Did you take a mathematics course in college? \_\_\_\_\_yes \_\_\_\_\_no

Indicate the duration of schooling that your mother received, including any higher education, by checking the number of years that comes closest: \_\_\_\_\_4 \_\_\_\_\_8 \_\_\_\_\_12 \_\_\_\_\_16  
\_\_\_\_\_20

Indicate your father's years of schooling: \_\_\_\_\_4 \_\_\_\_\_8 \_\_\_\_\_12 \_\_\_\_\_16 \_\_\_\_\_20

Remember to include your code number.

**Sessions 3,4:**

Welcome to this experiment! As you know, you have already earned a participation fee. The decisions you make will also influence your earnings. Please do not communicate with the other participants in the experiment. If you have a question, please raise your hand, and the experimenter will come to you and answer it in private. If you stick to these rules, you will be paid in cash, after the experiment.

Please indicate your code number on the top of this sheet, and also on all other sheets that you will receive. This is important to identify your earnings correctly, and protects your personal anonymity.

For some of the decisions you make, there will be coin flips that also influence your earnings. They will be carried out after the experiment, when you collect your earnings. Each participant will observe the coin flips that are relevant for him or her, and all probability numbers included below are meant to represent independent chance moves. In other words, for every lottery that is described below, there will be separate coin flips, and each participant will get a separate set of coin flips.

For example, if a lottery contains a 50% chance to win and a 50% chance to lose, a single coin flip will be made, and you will win if Heads comes up. If a different lottery contains a chance of 25% to win and a 75% chance to lose, then two coin flips will be made – you win if Heads comes up in both flips, and lose otherwise.

You can have as much time as you want, to make each decision. Please start as soon as the first decision form is handed out to you.

[Page break]

You face the following pair of concurrent decisions. First examine both decisions, then indicate your choices, by circling the corresponding letter. Both choices will be payoff relevant, i.e. the gains and losses will be added to your overall payment.

Decision (i): Choose between

- A. a sure gain of £2.40
- B. a 25% chance to gain £10.00 and a 75% chance to gain £0.00.

Decision (ii): Choose between

C. a sure loss of £7.50

D. a 75% chance to lose £10.00, and a 25% chance to lose £0.00.

Remember to include your code number.

[Page break]

Before continuing, please note that your participation fee has been raised by an additional £10. This will be added to your previously announced participation fee, and all gains and losses will also be added or subtracted.

Overall, the average earnings will be about £22.

[Page break]

You face the following pair of concurrent decisions. First examine both decisions, then indicate your choices, by circling the corresponding letter. Both choices will be payoff relevant, i.e. the gains and losses will be added to your overall payment.

Decision (iii): Choose between

E. a sure gain of £0.50

F. a 50% chance to gain £6.00 and a 50% chance to lose £4.00.

Decision (iv): Choose between

G. a sure loss of £5.00

H. a 50% chance to lose £10.00, and a 50% chance to lose £0.00.

Remember to include your code number.

[Page break]

The following are some numerical problems. Please answer the questions as well as you can.

First problem: What is 15% of 1,000? \_\_\_\_\_

Second problem: A car rental agency charges \$35 a day plus \$0.14 per mile for its rental cars.

If these charges include tax, what is the total cost of travelling 300 miles over 3 days in a car rented from this agency? \_\_\_\_\_\$42 \_\_\_\_\_\$105 \_\_\_\_\_\$125 \_\_\_\_\_\$147 \_\_\_\_\_\$300

Third problem: Which of the following is larger than  $\frac{3}{5}$ ? \_\_\_\_\_ $\frac{19}{35}$  \_\_\_\_\_ $\frac{13}{20}$   
\_\_\_\_\_ $\frac{4}{7}$  \_\_\_\_\_ $\frac{7}{13}$  \_\_\_\_\_None of the above

Fourth problem: If it takes 5 people 5 months to save a total of \$5,000, how many months

would it take 100 people to save a total of \$100,000? \_\_\_\_\_

Fifth problem: A TV and a radio cost \$110 in total. The TV costs \$100 more than the radio.  
How much does the radio cost? \_\_\_\_\_

Remember to include your code number.

[Page break]

Finally, please fill in the questionnaire below. You can be assured that all information will be stored in a 100% anonymous way, ensuring your privacy. Please respond truthfully, to support us in our research.

Age: \_\_\_\_\_

Sex: \_\_\_\_\_

Main subject of study: \_\_\_\_\_

Year of study: \_\_\_\_\_

Your average monthly budget, including all expenses for food and lodging: \_\_\_\_\_

Do you currently work for money? \_\_\_\_\_

Please indicate your main source of income: \_\_\_\_\_

Nationality: \_\_\_\_\_

In your household, do you live (check all that apply): \_\_\_\_\_with parents \_\_\_\_\_alone  
\_\_\_\_\_with partner \_\_\_\_\_with children \_\_\_\_\_none of the aforementioned, but sharing  
an apartment with someone else.

Please indicate your level of mathematics education: Did you receive at least 4 years of mathematics education in before attending university? \_\_\_\_yes \_\_\_\_no

Did you take a mathematics course in college? \_\_\_\_yes \_\_\_\_no

Indicate the duration of schooling that your mother received, including any higher education, by checking the number of years that comes closest: \_\_\_\_\_4 \_\_\_\_\_8 \_\_\_\_\_12 \_\_\_\_\_16  
\_\_\_\_\_20

Indicate your father's years of schooling: \_\_\_\_\_4 \_\_\_\_\_8 \_\_\_\_\_12 \_\_\_\_\_16 \_\_\_\_\_20

Remember to include your code number.

**Sessions 5,6:**

Welcome to this experiment! As you know, you have already earned a participation fee. Please do not communicate with the other participants in the experiment. If you have a question, please raise your hand, and the experimenter will come to you and answer it in private. If you stick to these rules, you will be paid in cash, after the experiment.

Please indicate your code number on the top of this sheet, and also on all other sheets that you will receive. This is important to identify your earnings correctly, and protects your personal anonymity.

For some of the decisions you make, there will be coin flips that also influence your outcomes. They will be carried out after the experiment, when you collect your earnings. Each participant will observe the coin flips that are relevant for him or her, and all probability numbers included below are meant to represent independent chance moves. In other words, for every lottery that is described below, there will be separate coin flips, and each participant will get a separate set of coin flips.

For example, if a lottery contains a 50% chance to win and a 50% chance to lose, a single coin flip will be made, and you will win if Heads comes up. If a different lottery contains a chance of 25% to win and a 75% chance to lose, then two coin flips will be made – you win if Heads comes up in both flips, and lose otherwise.

Please note that all gains and losses will be hypothetical, i.e. they will not be added to your payment.

You can have as much time as you want, to make each decision. Please start as soon as the first decision form is handed out to you.

[Page break]

You face the following pair of concurrent decisions. First examine both decisions, then indicate your choices, by circling the corresponding letter.

Decision (i): Choose between

- A. a sure gain of £2.40
- B. a 25% chance to gain £10.00 and a 75% chance to gain £0.00.

Decision (ii): Choose between



- C. a sure loss of £7.50
- D. a 75% chance to lose £10.00, and a 25% chance to lose £0.00.

Remember to include your code number.

[Page break]

[The following page was presented to one third of the participants.]

You now have the opportunity to play a gamble that offers a 50% chance to win £4 and a 50% chance to lose £2. Which of the following do you choose?

- A. Play the gamble.
- B. Do not play the gamble.

Remember to include your code number.

[Page break]

[The following page was presented to the second third of the participants.]

You now have the opportunity to play a gamble that offers a 50% chance to win £4 and a 50% chance to lose £2.

You can play the gamble several times, not just once. For each gamble that you play, there will be a separate coin flip.

You will play the gamble [50% chance to win £4 and 50% chance to lose £2] five times, but you do not yet know your wins and losses. Which of the following do you choose?

- A. Play the gamble for the sixth time.
- B. Do not play the gamble for the sixth time.

Remember to include your code number.

[Page break]

[The following page was presented to the final third of participants.]

You now have the opportunity to play a gamble that offers a 50% chance to win £4 and a 50% chance to lose £2.

You can play the gamble several times, not just once. For each gamble that you play [50% chance to win £4 and 50% to lose £2], there will be a separate coin flip. Which of the following do you choose?

A. Play the gamble six times.

B. Play the gamble five times.

Remember to include your code number.

[Page break]

The following are some numerical problems. Please answer the questions as well as you can.

First problem: What is 15% of 1,000? \_\_\_\_\_

Second problem: A car rental agency charges \$35 a day plus \$0.14 per mile for its rental cars.

If these charges include tax, what is the total cost of travelling 300 miles over 3 days in a car rented from this agency? \_\_\_\_\_\$42 \_\_\_\_\_\$105 \_\_\_\_\_\$125 \_\_\_\_\_\$147 \_\_\_\_\_\$300

Third problem: Which of the following is larger than  $\frac{3}{5}$ ? \_\_\_\_\_ $\frac{19}{35}$  \_\_\_\_\_ $\frac{13}{20}$   
\_\_\_\_\_ $\frac{4}{7}$  \_\_\_\_\_ $\frac{7}{13}$  \_\_\_\_\_None of the above

Fourth problem: If it takes 5 people 5 months to save a total of \$5,000, how many months would it take 100 people to save a total of \$100,000? \_\_\_\_\_

Fifth problem: A TV and a radio cost \$110 in total. The TV costs \$100 more than the radio. How much does the radio cost? \_\_\_\_\_

Remember to include your code number.

[Page break]

Finally, please fill in the questionnaire below. You can be assured that all information will be stored in a 100% anonymous way, ensuring your privacy. Please respond truthfully, to support us in our research.

Age: \_\_\_\_\_

Sex: \_\_\_\_\_

Main subject of study: \_\_\_\_\_

Year of study: \_\_\_\_\_

Your average monthly budget, including all expenses for food and lodging: \_\_\_\_\_

Do you currently work for money? \_\_\_\_\_

Please indicate your main source of income: \_\_\_\_\_

Nationality: \_\_\_\_\_

In your household, do you live (check all that apply): \_\_\_\_\_with parents \_\_\_\_\_alone  
\_\_\_\_\_with partner \_\_\_\_\_with children \_\_\_\_\_none of the aforementioned, but sharing  
an apartment with someone else.

Please indicate your level of mathematics education: Did you receive at least 4 years of mathematics education in before attending university? \_\_\_\_yes \_\_\_\_no

Did you take a mathematics course in college? \_\_\_\_\_yes \_\_\_\_\_no

Indicate the duration of schooling that your mother received, including any higher education, by checking the number of years that comes closest: \_\_\_\_\_4 \_\_\_\_\_8 \_\_\_\_\_12 \_\_\_\_\_16  
\_\_\_\_\_20

Indicate your father's years of schooling: \_\_\_\_\_4 \_\_\_\_\_8 \_\_\_\_\_12 \_\_\_\_\_16 \_\_\_\_\_20

Remember to include your code number.

### **Session 7:**

Welcome to this experiment! As you know, you have already earned a participation fee. Please do not communicate with the other participants in the experiment. If you have a question, please raise your hand, and the experimenter will come to you and answer it in private. If you stick to these rules, you will be paid in cash, after the experiment.

Please indicate your code number on the top of this sheet, and also on all other sheets that you will receive. This is important to identify your earnings correctly, and protects your personal anonymity.

For some of the decisions you make, there will be coin flips that also influence your outcomes. They will be carried out after the experiment, when you collect your earnings. Each participant will observe the coin flips that are relevant for him or her, and all probability numbers included below are meant to represent independent chance moves. In other words, for every lottery that is described below, there will be separate coin flips, and each participant will get a separate set of coin flips.

For example, if a lottery contains a 50% chance to win and a 50% chance to lose, a single coin flip will be made, and you will win if Heads comes up. If a different lottery contains a chance of 25% to win and a 75% chance to lose, then two coin flips will be made – you win if Heads comes

up in both flips, and lose otherwise.

Please note that all gains and losses will be hypothetical, i.e. they will not be added to your payment.

You can have as much time as you want, to make each decision. Please start as soon as the first decision form is handed out to you.

[Page break]

You face the following pair of concurrent decisions. First examine both decisions, then indicate your choices, by circling the corresponding letter.

Decision (i): Choose between

- A. a sure gain of £2.40
- B. a 25% chance to gain £10.00 and a 75% chance to gain £0.00.

Decision (ii): Choose between

- C. a sure loss of £7.50
- D. a 75% chance to lose £10.00, and a 25% chance to lose £0.00.

Remember to include your code number.

[Page break]

Before continuing, please note again that all the gains and losses are hypothetical, so they will not be added to or subtracted from your earnings. Hence, the overall earnings will be £22 for each participant.

[Page break]

You face the following pair of concurrent decisions. First examine both decisions, then indicate your choices, by circling the corresponding letter.

Decision (iii): Choose between

- E. a sure gain of £0.50
- F. a 50% chance to gain £6.00 and a 50% chance to lose £4.00.

Decision (iv): Choose between

- G. a sure loss of £5.00
- H. a 50% chance to lose £10.00, and a 50% chance to lose £0.00.

Remember to include your code number.

[Page break]

The following are some numerical problems. Please answer the questions as well as you can.

First problem: What is 15% of 1,000? \_\_\_\_\_

Second problem: A car rental agency charges \$35 a day plus \$0.14 per mile for its rental cars.

If these charges include tax, what is the total cost of travelling 300 miles over 3 days in a car rented from this agency? \_\_\_\_\_\$42 \_\_\_\_\_\$105 \_\_\_\_\_\$125 \_\_\_\_\_\$147 \_\_\_\_\_\$300

Third problem: Which of the following is larger than  $\frac{3}{5}$ ? \_\_\_\_\_ $\frac{19}{35}$  \_\_\_\_\_ $\frac{13}{20}$   
\_\_\_\_\_ $\frac{4}{7}$  \_\_\_\_\_ $\frac{7}{13}$  \_\_\_\_\_None of the above

Fourth problem: If it takes 5 people 5 months to save a total of \$5,000, how many months would it take 100 people to save a total of \$100,000? \_\_\_\_\_

Fifth problem: A TV and a radio cost \$110 in total. The TV costs \$100 more than the radio. How much does the radio cost? \_\_\_\_\_

Remember to include your code number.

[Page break]

Finally, please fill in the questionnaire below. You can be assured that all information will be stored in a 100% anonymous way, ensuring your privacy. Please respond truthfully, to support us in our research.

Age: \_\_\_\_\_

Sex: \_\_\_\_\_

Main subject of study: \_\_\_\_\_

Year of study: \_\_\_\_\_

Your average monthly budget, including all expenses for food and lodging: \_\_\_\_\_

Do you currently work for money? \_\_\_\_\_

Please indicate your main source of income: \_\_\_\_\_

Nationality: \_\_\_\_\_

In your household, do you live (check all that apply): \_\_\_\_\_with parents \_\_\_\_\_alone  
\_\_\_\_\_with partner \_\_\_\_\_with children \_\_\_\_\_none of the aforementioned, but sharing

an apartment with someone else.

Please indicate your level of mathematics education: Did you receive at least 4 years of mathematics education in before attending university? \_\_\_yes \_\_\_no

Did you take a mathematics course in college? \_\_\_yes \_\_\_no

Indicate the duration of schooling that your mother received, including any higher education, by checking the number of years that comes closest: \_\_\_\_\_4 \_\_\_\_\_8 \_\_\_\_\_12 \_\_\_\_\_16  
\_\_\_\_\_20

Indicate your father's years of schooling: \_\_\_\_\_4 \_\_\_\_\_8 \_\_\_\_\_12 \_\_\_\_\_16 \_\_\_\_\_20

Remember to include your code number.

### **Sessions 8,9:**

Welcome to this experiment! As you know, you have already earned a participation fee. The decisions you make will also influence your earnings. Please do not communicate with the other participants in the experiment. If you have a question, please raise your hand, and the experimenter will come to you and answer it in private. If you stick to these rules, you will be paid in cash, after the experiment.

Please indicate your code number on the top of this sheet, and also on all other sheets that you will receive. This is important to identify your earnings correctly, and protects your personal anonymity.

For some of the decisions you make, there will be coin flips that also influence your earnings. They will be carried out after the experiment, when you collect your earnings. Each participant will observe the coin flips that are relevant for him or her, and all probability numbers included below are meant to represent independent chance moves. In other words, for every lottery that is described below, there will be separate coin flips, and each participant will get a separate set of coin flips.

For example, if a lottery contains a 50% chance to win and a 50% chance to lose, a single coin flip will be made, and you will win if Heads comes up. If a different lottery contains a chance of 25% to win and a 75% chance to lose, then two coin flips will be made – you win if Heads comes up in both flips, and lose otherwise.

You can have as much time as you want, to make each decision. Please start as soon as the first decision form is handed out to you.

[Page break]

You face the following decision. Please indicate your choice by circling the corresponding letter. The choice will be payoff relevant, i.e. the gains and losses will be added to your overall payment.

Choose between

- A. a sure loss of £5.10
- B. a 75% chance to lose £7.60 and a 25% chance to gain £2.40
- C. a 56.25% chance to lose £10.00, a 37.5% chance to gain/lose £0.00, and a 6.25% chance to gain £10.00
- D. a 75% chance to lose £7.50 and a 25% chance to gain £2.50

Remember to include your code number.

[Page break]

Before continuing, please note that your participation fee has been raised by an additional £10. This will be added to your previously announced participation fee, and all gains and losses will also be added or subtracted.

[Page break]

Please fill in the questionnaire below. You can be assured that all information will be stored in a 100% anonymous way, ensuring your privacy. Please respond truthfully, to support us in our research.

Age: \_\_\_\_\_

Sex: \_\_\_\_\_

Main subject of study: \_\_\_\_\_

Year of study: \_\_\_\_\_

Your average monthly budget, including all expenses for food and lodging: \_\_\_\_\_

Do you currently work for money? \_\_\_\_\_

Please indicate your main source of income: \_\_\_\_\_

Nationality: \_\_\_\_\_

In your household, do you live (check all that apply): \_\_\_\_\_with parents \_\_\_\_\_alone  
\_\_\_\_\_with partner \_\_\_\_\_with children \_\_\_\_\_none of the aforementioned, but sharing  
an apartment with someone else.

Did you take a mathematics course in college? \_\_\_\_\_yes \_\_\_\_\_no

Indicate the duration of schooling that your mother received, including any higher education,  
by checking the number of years that comes closest: \_\_\_\_\_4 \_\_\_\_\_8 \_\_\_\_\_12 \_\_\_\_\_16  
\_\_\_\_\_20

Indicate your father's years of schooling: \_\_\_\_\_4 \_\_\_\_\_8 \_\_\_\_\_12 \_\_\_\_\_16 \_\_\_\_\_20

Remember to include your code number.

[Page break]

You face the following pair of concurrent decisions. First examine both decisions, then indicate  
your choices, by circling the corresponding letter. Both choices will be payoff relevant, i.e. the  
gains and losses will be added to your overall payment.

Decision (ii): Choose between

E. a 50% chance to lose £5.00 and a 50% chance to gain £6.00

F. a sure gain/loss of £0.00

Decision (iii): Choose between

G. a 50% chance to lose £10.00, and a 50% chance to gain/lose £0.00

H. a sure loss of £5.00

Remember to include your code number.

[Page break]

The following are some numerical problems. Please answer the questions as well as you can.

First problem: What is 15% of 1,000? \_\_\_\_\_

Second problem: A car rental agency charges \$35 a day plus \$0.14 per mile for its rental cars.  
If these charges include tax, what is the total cost of travelling 300 miles over 3 days in a car rented  
from this agency? \_\_\_\_\_\$42 \_\_\_\_\_\$105 \_\_\_\_\_\$125 \_\_\_\_\_\$147 \_\_\_\_\_\$300

Third problem: Which of the following is larger than  $\frac{3}{5}$ ? \_\_\_\_\_ $\frac{19}{35}$  \_\_\_\_\_ $\frac{13}{20}$   
\_\_\_\_\_ $\frac{4}{7}$  \_\_\_\_\_ $\frac{7}{13}$  \_\_\_\_\_None of the above



Fourth problem: If it takes 5 people 5 months to save a total of \$5,000, how many months would it take 100 people to save a total of \$100,000? \_\_\_\_\_

Fifth problem: A TV and a radio cost \$110 in total. The TV costs \$100 more than the radio. How much does the radio cost? \_\_\_\_\_

Remember to include your code number.

### **Sessions 10,11:**

Welcome to this experiment! As you know, you have already earned a participation fee. The decisions you make will also influence your earnings. Please do not communicate with the other participants in the experiment. If you have a question, please raise your hand, and the experimenter will come to you and answer it in private. If you stick to these rules, you will be paid in cash, after the experiment.

Please indicate your code number on the top of this sheet, and also on all other sheets that you will receive. This is important to identify your earnings correctly, and protects your personal anonymity.

For some of the decisions you make, there will be coin flips that also influence your earnings. They will be carried out after the experiment, when you collect your earnings. Each participant will observe the coin flips that are relevant for him or her, and all probability numbers included below are meant to represent independent chance moves. In other words, for every lottery that is described below, there will be separate coin flips, and each participant will get a separate set of coin flips.

For example, if a lottery contains a 50% chance to win and a 50% chance to lose, a single coin flip will be made, and you will win if Heads comes up. If a different lottery contains a chance of 25% to win and a 75% chance to lose, then two coin flips will be made – you win if Heads comes up in both flips, and lose otherwise.

You can have as much time as you want, to make each decision. Please start as soon as the first decision form is handed out to you.

[Page break]

You face the following decision. Please indicate your choice by circling the corresponding letter.

The choice will be payoff relevant, i.e. the gains and losses will be added to your overall payment.

Choose between

1. a sure loss of £5.10
2. a 25% chance to gain £2.40 and a 75% chance to lose £7.60
3. a 25% chance to gain £2.50 and a 75% chance to lose £7.50
4. a 6.25% chance to gain £10.00, a 37.5% chance to gain/lose £0.00, and a 56.25% chance to lose £10.00

Remember to include your code number.

[Page break]

Before continuing, please note that your participation fee has been raised by an additional £5. This will be added to your previously announced participation fee, and all gains and losses will also be added or subtracted.

[Page break]

Please fill in the questionnaire below. You can be assured that all information will be stored in a 100% anonymous way, ensuring your privacy. Please respond truthfully, to support us in our research.

Age: \_\_\_\_\_

Sex: \_\_\_\_\_

Main subject of study: \_\_\_\_\_

Year of study: \_\_\_\_\_

Your average monthly budget, including all expenses for food and lodging: \_\_\_\_\_

Do you currently work for money? \_\_\_\_\_

Please indicate your main source of income: \_\_\_\_\_

Nationality: \_\_\_\_\_

In your household, do you live (check all that apply): \_\_\_\_\_ with parents \_\_\_\_\_ alone  
\_\_\_\_\_ with partner \_\_\_\_\_ with children \_\_\_\_\_ none of the aforementioned, but sharing  
an apartment with someone else.

Did you take a mathematics course in college? \_\_\_\_\_ yes \_\_\_\_\_ no

Indicate the duration of schooling that your mother received, including any higher education, by checking the number of years that comes closest: \_\_\_\_\_4 \_\_\_\_\_8 \_\_\_\_\_12 \_\_\_\_\_16  
\_\_\_\_\_20

Indicate your father's years of schooling: \_\_\_\_\_4 \_\_\_\_\_8 \_\_\_\_\_12 \_\_\_\_\_16 \_\_\_\_\_20

Remember to include your code number.

[Page break]

The following three pages contain three concurrent decisions. First examine all decisions, then indicate your choices. All choices will be payoff relevant, i.e. the gains and losses will be added to your overall payment.

As before, all probability numbers included below are meant to represent independent chance moves. In other words, there will be separate random draws for each uncertain event, and each participant will get a separate set of random draws.

[Page break]

Consider the following uncertain gain:

Q: a 50% chance to gain £10.00 and a 50% chance to gain £0.00

Also consider the following fixed gain:

R: a sure gain of £X

The exact value of X is randomly chosen at the end of the experiment: All multiples of £0.10 that lie between £0.10 and £10.00 are equally likely.

Make the following choice:

I want to make the fixed gain R if the gain £X is higher than £\_\_\_\_\_ (insert a number between 0.00 and 10.00). If £X is lower than or equal to that, I want to make the uncertain gain Q.

Remember to include your code number.

[Page break]

Consider the following uncertain loss:

S: a 50% chance to lose £10.00 and a 50% chance to lose £0.00

Also consider the following fixed loss:

T: a sure loss of £Y

The exact value of Y is randomly chosen at the end of the experiment: All multiples of £0.10 that lie between £0.10 and £10.00 are equally likely.

Make the following choice:

I want to make the fixed loss T if the loss £Y is lower than £\_\_\_\_\_ (insert a number between 0.00 and 10.00). If £Y is higher than or equal to that, I want to make the uncertain loss S.

Remember to include your code number.

[Page break]

Consider the following uncertain gain/loss:

U: a 50% chance to gain £5.00 and a 50% chance to lose £5.00

Also consider the following fixed gain/loss:

V: a sure gain/loss of £Z

The exact value of Z is randomly chosen at the end of the experiment: All multiples of £0.10 that lie between -£4.90 and +£5.00 are equally likely. Negative numbers indicate that you lose, and positive numbers indicate that you gain.

Make the following choice:

I want to make the fixed gain/loss V if the gain/loss £Z is higher than £\_\_\_\_\_ (insert a number between -5.00 and +5.00). If £Z is lower than or equal to that, I want to make the uncertain loss U.

Remember to include your code number.

[Page break]

The following are some numerical problems. Please answer the questions as well as you can.

First problem: What is 15% of 1,000? \_\_\_\_\_

Second problem: A car rental agency charges \$35 a day plus \$0.14 per mile for its rental cars. If these charges include tax, what is the total cost of travelling 300 miles over 3 days in a car rented from this agency? \_\_\_\_\_ \$42 \_\_\_\_\_ \$105 \_\_\_\_\_ \$125 \_\_\_\_\_ \$147 \_\_\_\_\_ \$300

Third problem: Which of the following is larger than  $\frac{3}{5}$ ? \_\_\_\_\_  $\frac{19}{35}$  \_\_\_\_\_  $\frac{13}{20}$  \_\_\_\_\_  $\frac{4}{7}$  \_\_\_\_\_  $\frac{7}{13}$  \_\_\_\_\_ None of the above

Fourth problem: If it takes 5 people 5 months to save a total of \$5,000, how many months would it take 100 people to save a total of \$100,000? \_\_\_\_\_

Fifth problem: A TV and a radio cost \$110 in total. The TV costs \$100 more than the radio. How much does the radio cost? \_\_\_\_\_

Remember to include your code number.

### **Sessions 12, 13, 14, 15:**

Welcome to this experiment! As you know, you have already earned a participation fee. Please do not communicate with the other participants in the experiment. If you have a question, please raise your hand, and the experimenter will come to you and answer it in private. If you stick to these rules, you will be paid in cash, after the experiment.

Please indicate your code number on the top of this sheet, and also on all other sheets that you will receive. This is important to identify your earnings correctly, and protects your personal anonymity.

For some of the decisions you make, there will be coin flips that also influence your outcomes. They will be carried out after the experiment, when you collect your earnings. Each participant will observe the coin flips that are relevant for him or her, and all probability numbers included below are meant to represent independent chance moves. In other words, for every lottery that is described below, there will be separate coin flips, and each participant will get a separate set of coin flips.

For example, if a lottery contains a 50% chance to win and a 50% chance to lose, a single coin flip will be made, and you will win if Heads comes up. If a different lottery contains a chance of 25% to win and a 75% chance to lose, then two coin flips will be made – you win if Heads comes up in both flips, and lose otherwise.

Please note that all gains and losses will be hypothetical, i.e. they will not be added to your payment.

You can have as much time as you want, to make each decision. Please start as soon as the first decision form is handed out to you.

[Page break]

You face the following pair of concurrent decisions. First examine both decisions, then indicate your choices, by circling the corresponding letter.

Decision (i): Choose between

- A. a sure gain of £240.00
- B. a 25% chance to gain £1,000.00 and a 75% chance to gain £0.00.

Decision (ii): Choose between

- C. a sure loss of £750.00
- D. a 75% chance to lose £1,000.00, and a 25% chance to lose £0.00.

Remember to include your code number.

[Page break]

Before continuing, please note again that all the gains and losses are hypothetical, so they will not be added to or subtracted from your earnings. Hence, the overall earnings will be £22 for each participant.

[Page break]

Please fill in the questionnaire below. You can be assured that all information will be stored in a 100% anonymous way, ensuring your privacy. Please respond truthfully, to support us in our research.

Age: \_\_\_\_\_

Sex: \_\_\_\_\_

Main subject of study: \_\_\_\_\_

Year of study: \_\_\_\_\_

Your average monthly budget, including all expenses for food and lodging: \_\_\_\_\_

Do you currently work for money? \_\_\_\_\_

Please indicate your main source of income: \_\_\_\_\_

Nationality: \_\_\_\_\_

In your household, do you live (check all that apply): \_\_\_\_\_ with parents \_\_\_\_\_ alone  
\_\_\_\_\_ with partner \_\_\_\_\_ with children \_\_\_\_\_ none of the aforementioned, but sharing  
an apartment with someone else.

Please indicate your level of mathematics education: Did you receive at least 4 years of mathematics education in before attending university? \_\_\_\_yes \_\_\_\_no

Did you take a mathematics course in college? \_\_\_\_yes \_\_\_\_no

Indicate the duration of schooling that your mother received, including any higher education, by checking the number of years that comes closest: \_\_\_\_\_4 \_\_\_\_\_8 \_\_\_\_\_12 \_\_\_\_\_16  
\_\_\_\_\_20

Indicate your father's years of schooling: \_\_\_\_\_4 \_\_\_\_\_8 \_\_\_\_\_12 \_\_\_\_\_16 \_\_\_\_\_20

Remember to include your code number.

[Page break]

You face the following pair of concurrent decisions. First examine both decisions, then indicate your choices, by circling the corresponding letter.

Decision (iii): Choose between

E. a sure gain/loss of £0.00

F. a 50% chance to lose £500.00 and a 50% chance to gain £600.00.

Decision (iv): Choose between

G. a sure loss of £500.00

H. a 50% chance to lose £1,000.00, and a 50% chance to lose £0.00.

Remember to include your code number.

[Page break]

The following are some numerical problems. Please answer the questions as well as you can.

First problem: What is 15% of 1,000? \_\_\_\_\_

Second problem: A car rental agency charges \$35 a day plus \$0.14 per mile for its rental cars. If these charges include tax, what is the total cost of travelling 300 miles over 3 days in a car rented from this agency? \_\_\_\_\_\$42 \_\_\_\_\_\$105 \_\_\_\_\_\$125 \_\_\_\_\_\$147 \_\_\_\_\_\$300

Third problem: Which of the following is larger than  $\frac{3}{5}$ ? \_\_\_\_\_ $\frac{19}{35}$  \_\_\_\_\_ $\frac{13}{20}$   
\_\_\_\_\_ $\frac{4}{7}$  \_\_\_\_\_ $\frac{7}{13}$  \_\_\_\_\_None of the above

Fourth problem: If it takes 5 people 5 months to save a total of \$5,000, how many months would it take 100 people to save a total of \$100,000? \_\_\_\_\_

Fifth problem: A TV and a radio cost \$110 in total. The TV costs \$100 more than the radio.  
How much does the radio cost? \_\_\_\_\_

Remember to include your code number.

**Email announcement:** 24 hours before any session, all participants who had signed up received the following email.

Dear \*\*\*\*,

I'm glad to inform you that you've been selected to take part in the [...] experiment tomorrow [...]. The experiment will consist of a short paper based task and should take about one hour.

By coming to the experiment, you will earn a participation fee of £22. This amount may be used as your endowment in the experiment. During the experiment, depending on your actions and chance, it might be possible to add to, or lose from, this amount. You'll be paid what remains at the end of the session. Please note that in this experiment it is possible, but very unlikely, that you could leave with no payment. Overall, you are about equally likely to make gains as losses (on top of the £22).

The session will be held at [...]. Please arrive promptly for the session, people arriving late are not guaranteed a place.

Let me know as soon as possible if you're not going to be able to come to the session tomorrow, and we can give your place to someone else.

Thanks for your interest in the work of [...]. See you tomorrow!



**Survey experiment:**

The ordering of treatments follows the description of Section 3 of the paper. Two additional treatments were conducted that contained one certainty equivalent task each — their instructions are omitted here but analogous tasks appear in other treatments. In all treatments the order of the choice options was randomized. All choices were presented twice, first on a screen that asked the participants to read through all questions, and then on a decision screen.

All survey participants were also presented the mathematics module, included at the end of this appendix. Questions (4) and (5) of the mathematics module were omitted if a participant's personal data shows that they did not attend high school or college, respectively.

**Treatment 1:**

The following page describes two decisions that you will be asked to make about winning or losing money. You will read about both decisions before deciding how to answer them. When it is time to decide, please make your decisions as though you were actually going to win or lose the money in all cases.

Please keep in mind that to win or lose in one decision does not make it more or less likely that you win or lose in another decision, as though the outcome of each decision were decided with a separate coin flip.

[new screen]

Decision 1: Choose between:

- A. winning \$240
- B. a 25% chance of winning \$1000 and a 75% chance of not winning or losing any money

Decision 2: Choose between:

- C. losing \$750
- D. a 75% chance of losing \$1000, and a 25% chance of not winning or losing any money

[new screen]

Now please answer both questions.

Decision 1: Choose between:

- A. winning \$240

B. a 25% chance of winning \$1000 and a 75% chance of not winning or losing any money

Decision 2: Choose between:

C. losing \$750

D. a 75% chance of losing \$1000, and a 25% chance of not winning or losing any money

**Treatment 2:**

The following page describes a decision that you will be asked to make about winning or losing money. You will read about the decision before deciding how to answer it. When it is time to decide, please make your decisions as though you were actually going to win or lose the money.

[new screen]

Choose between:

A. a 25% chance of winning \$240 and a 75% chance of losing \$760

B. losing \$510

C. a 25% chance of winning \$250 and a 75% chance of losing \$750

D. a 6.25% chance of winning \$1000, a 37.5% chance of not winning or losing any money, and a 56.25% chance of losing \$1000

[new screen]

Now please answer the question.

Choose between:

A. a 25% chance of winning \$240 and a 75% chance of losing \$760

B. losing \$510

C. a 25% chance of winning \$250 and a 75% chance of losing \$750

D. a 6.25% chance of winning \$1000, a 37.5% chance of not winning or losing any money, and a 56.25% chance of losing \$1000

**Treatment 3:**

The following page describes two decisions that you will be asked to make about winning or losing money. You will read about both decisions before deciding how to answer them. When it is time to decide, please make your decisions as though you were actually going to win or lose the money in all cases.

Please keep in mind that to win or lose in one decision does not make it more or less likely that you win or lose in another decision, as though the outcome of each decision were decided with a separate coin flip.

[new screen]

Decision 1: Choose between:

- A. not winning or losing any money
- B. a 50% chance of losing \$500 and a 50% chance of winning \$600

Before answering, read the next decision.

Decision 2: Choose between:

- C. losing \$500
- D. a 50% chance of losing \$1000, and a 50% chance of not winning or losing any money

[new screen]

Now please answer both questions.

Decision 1: Choose between:

- A. not winning or losing any money
- B. a 50% chance of losing \$500 and a 50% chance of winning \$600

Decision 2: Choose between:

- C. losing \$500
- D. a 50% chance of losing \$1000, and a 50% chance of not winning or losing any money

#### **Treatment 4:**

The following page describes a decision that you will be asked to make about winning or losing money. You will read about the decision before deciding how to answer it. When it is time to decide, please make your decisions as though you were actually going to win or lose the money.

Choose between:

- A. a 50% chance of losing \$1000 and a 50% chance of not winning or losing any money
- B. losing \$500
- C. a 50% chance of losing \$1000 and a 50% chance of winning \$100

D. a 25% chance of losing \$1500, a 25% chance of losing \$500, a 25% chance of losing \$400, and a 25% chance of winning \$600

[new screen]

Now please answer the question.

Choose between:

A. a 50% chance of losing \$1000 and a 50% chance of not winning or losing any money

B. losing \$500

C. a 50% chance of losing \$1000 and a 50% chance of winning \$100

D. a 25% chance of losing \$1500, a 25% chance of losing \$500, a 25% chance of losing \$400, and a 25% chance of winning \$600

#### **Treatment 5:**

The following pages describe six decisions that you will be asked to make about winning or losing money. You will read about all six decisions before deciding how to answer them. When it is time to decide, please make your decisions as though you were actually going to win or lose the money in all six cases.

Please keep in mind that to win or lose in one decision does not make it more or less likely that you win or lose in another decision, as though the outcome of each decision were decided with a separate coin flip.

[new screen]

Decision 1: Choose between:

A. not winning or losing any money

B. a 50% chance of losing \$500 and a 50% chance of winning \$600

Before answering, please read the second decision.

Decision 2: Choose between:

C. losing \$500

D. a 50% chance of losing \$1000, and a 50% chance of not winning or losing any money

Before answering, continue to the next page to read the third decision.

[new screen]

Decision 3: Choose between:

E. a 50% chance of losing \$700 and a 50% chance of winning \$950

F. winning \$200

G. a 50% chance of losing \$550 and a 50% chance of winning \$950

H. a 25% chance of losing \$1450, a 25% chance of winning \$50, a 25% chance of winning \$200, and a 25% chance of winning \$1700

Before answering, please continue to the next page to read the fourth decision.

[new screen]

Decision 4: Consider the following:

I. You have a 50% chance of winning \$100 and a 50% chance of winning \$1600

J. You will be given some unknown amount of money

What is the smallest amount of money that you would need to be given in option J for you to select that option over taking your chances with option I?

Rules:

- Before the study began, an unknown amount between \$100 and \$1600 was determined for option J. If this unknown amount is higher than your answer, then you will receive the unknown amount. If the unknown amount is lower than or equal to your answer, you will receive option I.
- All amounts between \$100 and \$1600 are possible and equally likely, as the unknown amount.

Before answering, please continue to the next page to read the fifth decision.

[new screen]

Decision 5: Consider the following:

K. You have a 50% chance of winning \$850 and a 50% chance of winning \$2350

L. You will be given some unknown amount of money

What is the smallest amount of money that you would need to be given in option L for you to select that option over taking your chances with option K?

Rules:

- Before the study began, an unknown amount between \$100 and \$1600 was determined for

option L. If this unknown amount is higher than your answer, then you will receive the unknown amount. If the unknown amount is lower than or equal to your answer, you will receive option K.

- All amounts between \$850 and \$2350 are possible and equally likely, as the unknown amount.

Before answering, please continue to the next page to read the sixth and final decision.

[new screen]

Decision 6: Consider the following:

M. You have a 50% chance of losing \$1400 and a 50% chance of winning \$100

N. You win or lose some unknown amount of money

The amount of money you could lose in option N could be as much as \$1400, or you could win up to \$100. What is the worst outcome that you would be willing to accept in option N and still be willing to select this over taking your chances with option M?

Rules:

- Before the study began, an unknown amount between “losing \$1400” and “winning \$100” was determined for option N. If this unknown amount is better for you than your answer, then you will get the unknown amount. If the unknown amount is worse than or equal to your answer, you will receive option M.

- All amounts between “losing \$1400” and “winning \$100” are possible and equally likely, as the unknown amount.

Now continue to answer all six questions.

[new screen]

Decision 1: Choose between:

A. not winning or losing any money

B. a 50% chance of losing \$500 and a 50% chance of winning \$600

Decision 2: Choose between:

C. losing \$500

D. a 50% chance of losing \$1000, and a 50% chance of not winning or losing any money

[new screen]

Decision 3: Choose between:

E. a 50% chance of losing \$700 and a 50% chance of winning \$950

F. winning \$200

G. a 50% chance of losing \$550 and a 50% chance of winning \$950

H. a 25% chance of losing \$1450, a 25% chance of winning \$50, a 25% chance of winning \$200, and a 25% chance of winning \$1700

[new screen]

Decision 4: Consider the following:

I. You have a 50% chance of winning \$100 and a 50% chance of winning \$1600

J. You will be given some unknown amount of money

What is the smallest amount of money that you would need to be given in option J for you to select that option over taking your chances with option I? \_\_\_\_\_

Rules:

- Before the study began, an unknown amount between \$100 and \$1600 was determined for option J. If this unknown amount is higher than your answer, then you will receive the unknown amount. If the unknown amount is lower than or equal to your answer, you will receive option I.

- All amounts between \$100 and \$1600 are possible and equally likely, as the unknown amount.

[new screen]

Decision 5: Consider the following:

K. You have a 50% chance of winning \$850 and a 50% chance of winning \$2350

L. You will be given some unknown amount of money

What is the smallest amount of money that you would need to be given in option L for you to select that option over taking your chances with option K? \_\_\_\_\_

Rules:

- Before the study began, an unknown amount between \$100 and \$1600 was determined for option L. If this unknown amount is higher than your answer, then you will receive the unknown amount. If the unknown amount is lower than or equal to your answer, you will receive option K.

- All amounts between \$850 and \$2350 are possible and equally likely, as the unknown amount.

[new screen]

Decision 6: Consider the following:

M. You have a 50% chance of losing \$1400 and a 50% chance of winning \$100

N. You win or lose some unknown amount of money

The amount of money you could lose in option N could be as much as \$1400, or you could win up to \$100. What is the worst outcome that you would be willing to accept in option N and still be willing to select this over taking your chances with option M? (Please make one entry.)

losing\_\_\_\_\_ [range 0 – 1400]

winning \_\_\_\_\_ [range 0 – 100]

Rules:

- Before the study began, an unknown amount between “losing \$1400” and “winning \$100” was determined for option N. If this unknown amount is better for you than your answer, then you will get the unknown amount. If the unknown amount is worse than or equal to your answer, you will receive option M.

- All amounts between “losing \$1400” and “winning \$100” are possible and equally likely, as the unknown amount.

### **Treatment 6:**

The following pages describe six decisions that you will be asked to make about winning or losing money. You will read about all six decisions before deciding how to answer them. When it is time to decide, please make your decisions as though you were actually going to win or lose the money in all six cases.

Please keep in mind that to win or lose in one decision does not make it more or less likely that you win or lose in another decision, as though the outcome of each decision were decided with a separate coin flip.

[new screen]

Decision 1: Choose between:



- A. losing \$500
- B. a 50% chance of losing \$1000 and a 50% chance of not winning or losing any money

Before answering, read the second decision.

Decision 2: Choose between:

- C. winning \$1500
- D. a 50% chance of winning \$1000, and a 50% chance of winning \$2100

Before answering, continue to the next page to read the third decision.

[new screen]

Decision 3: Consider the following:

- E. You have a 50% chance of winning \$500 and a 50% chance of winning \$1500
- F. You will be given some unknown amount of money

What is the smallest amount of money that you would need to be given in option F for you to select that option over taking your chances with option E?

Rules:

- Before the study began, an unknown amount between \$500 and \$1500 was determined for option F. If this unknown amount is higher than your answer, then you will receive the unknown amount. If the unknown amount is lower than or equal to your answer, you will receive option E.
- All amounts between \$500 and \$1500 are possible and equally likely, as the unknown amount.

Before answering, continue to the next page to read the fourth decision.

[new screen]

Decision 4: Consider the following:

- G. You have a 50% chance of losing \$1500 and a 50% chance of losing \$500
- H. You will lose some unknown amount of money

What is the largest amount that you would be willing to lose in option H for you to select that option over taking your chances with option G?

Rules:

- Before the study began, an unknown amount between \$500 and \$1500 was determined

for option H. If this unknown amount is lower than your answer, then you will lose the unknown amount. If the unknown amount is higher than or equal to your answer, you will receive option G.

- All amounts between \$500 and \$1500 are possible and equally likely, as the unknown amount.

Before answering, continue to the next page to read the fifth decision.

[new screen]

Decision 5: Consider the following:

- I. You have a 50% chance of losing \$500 and a 50% chance of winning \$500
- J. You win or lose some unknown amount of money

The amount of money you could lose in option J could be as much as \$500, or you could win up to \$500. What is the worst outcome that you would be willing to accept in option J and still be willing to select this over taking your chances with option I?

Rules:

- Before the study began, an unknown amount between “losing \$500” and “winning \$500” was determined for option J. If this unknown amount is better for you than your answer, then you will get the unknown amount. If the unknown amount is worse than or equal to your answer, you will receive option I.

- All amounts between “losing \$500” and “winning \$500” are possible and equally likely, as the unknown amount.

Before answering, continue to the next page to read the sixth and final decision.

[new screen]

[Randomize the order of options K and L in decision 6. Use the same order on the screen where Rs enter their choices.]

Decision 6: Choose between:

- K. not winning or losing any money
- L. a 50% chance of losing \$500 and a 50% chance of winning \$600

Now please answer all six questions. Continue to the next page to make your decisions.

[new screen]

Decision 1: Choose between:

- A. losing \$500
- B. a 50% chance of losing \$1000 and a 50% chance of not winning or losing any money

Decision 2: Choose between:

- C. winning \$1500
- D. a 50% chance of winning \$1000, and a 50% chance of winning \$2100

[new screen]

Decision 3: Consider the following:

- E. You have a 50% chance of winning \$500 and a 50% chance of winning \$1500
- F. You will be given some unknown amount of money

What is the smallest amount of money that you would need to be given in option F for you to select that option over taking your chances with option E? \_\_\_\_\_

Rules:

- Before the study began, an unknown amount between \$500 and \$1500 was determined for option F. If this unknown amount is higher than your answer, then you will receive the unknown amount. If the unknown amount is lower than or equal to your answer, you will receive option E.
- All amounts between \$500 and \$1500 are possible and equally likely, as the unknown amount.

[new screen]

Decision 4: Consider the following:

- G. You have a 50% chance of losing \$1500 and a 50% chance of losing \$500
- H. You will lose some unknown amount of money

What is the largest amount that you would be willing to lose in option H for you to select that option over taking your chances with option G? \_\_\_\_\_

Rules:

- Before the study began, an unknown amount between \$500 and \$1500 was determined for option H. If this unknown amount is lower than your answer, then you will lose the unknown amount. If the unknown amount is higher than or equal to your answer, you will receive option G.

- All amounts between \$500 and \$1500 are possible and equally likely, as the unknown amount.

[new screen]

Decision 5: Consider the following:

- I. You have a 50% chance of losing \$500 and a 50% chance of winning \$500
- J. You win or lose some unknown amount of money

The amount of money you could lose in option J could be as much as \$500, or you could win up to \$500. What is the worst outcome that you would be willing to accept in option J and still be willing to select this over taking your chances with option I?

(Please make one entry)

losing \_\_\_\_\_ [range: 0 – 500]

winning \_\_\_\_\_ [range: 0 – 500]

Rules:

- Before the study began, an unknown amount between “losing \$500” and “winning \$500” was determined for option J. If this unknown amount is better for you than your answer, then you will get the unknown amount. If the unknown amount is worse than or equal to your answer, you will receive option I.

- All amounts between “losing \$500” and “winning \$500” are possible and equally likely, as the unknown amount.

[new screen]

Decision 6: Choose between:

- K. not winning or losing any money
- L. a 50% chance of losing \$500 and a 50% chance of winning \$600

### **Treatment 7:**

The following pages describe six decisions that you will be asked to make about winning or losing money. You will read about all six decisions before deciding how to answer them. When it is time to decide, please make your decisions as though you were actually going to win or lose the money in all six cases.

Please keep in mind that to win or lose in one decision does not make it more or less likely that you win or lose in another decision, as though the outcome of each decision were decided with a separate coin flip.

[new screen]

Decision 1: Choose between:

- A. winning \$850
- B. a 50% chance of winning \$100 and a 50% chance of winning \$1600

Before answering, read the second decision.

Decision 2: Choose between:

- C. losing \$650
- D. a 50% chance of losing \$1550, and a 50% chance of winning \$100

Before answering, continue to the next page to read the third decision.

[new screen]

Decision 3: Consider the following:

- E. You have a 50% chance of winning \$850 and a 50% chance of winning \$2350
- F. You will be given some unknown amount of money

What is the smallest amount of money that you would need to be given in option F for you to select that option over taking your chances with option E?

Rules:

- Before the study began, an unknown amount between \$850 and \$2350 was determined for option F. If this unknown amount is higher than your answer, then you will receive the unknown amount. If the unknown amount is lower than or equal to your answer, you will receive option E.
- All amounts between \$850 and \$2350 are possible and equally likely, as the unknown amount.

Before answering, continue to the next page to read the fourth decision.

[new screen]

Decision 4: Consider the following:

- G. You have a 50% chance of losing \$500 and a 50% chance of winning \$500

H. You win or lose some unknown amount of money

The amount of money you could lose in option H could be as much as \$500, or you could win up to \$500. What is the worst outcome that you would be willing to accept in option H and still be willing to select this over taking your chances with option G?

Rules:

- Before the study began, an unknown amount between “losing \$500” and “winning \$500” was determined for option H. If this unknown amount is better for you than your answer, then you will get the unknown amount. If the unknown amount is worse than or equal to your answer, you will receive option G.

- All amounts between “losing \$500” and “winning \$500” are possible and equally likely, as the unknown amount.

Before answering, continue to the next page to read the fifth decision.

[new screen]

Decision 5: Consider the following:

I. You have a 50% chance of losing \$650 and a 50% chance of winning \$850

J. You win or lose some unknown amount of money

The amount of money you could lose in option J could be as much as \$650, or you could win up to \$850. What is the worst outcome that you would be willing to accept in option J and still be willing to select this over taking your chances with option I?

Rules:

- Before the study began, an unknown amount between “losing \$650” and “winning \$850” was determined for option J. If this unknown amount is better for you than your answer, then you will get the unknown amount. If the unknown amount is worse than or equal to your answer, you will receive option I.

- All amounts between “losing \$650” and “winning \$850” are possible and equally likely, as the unknown amount.

Before answering, continue to the next page to read the sixth and final decision.

[new screen]

Decision 6: Consider the following:

K. You have a 50% chance of winning \$1000 and a 50% chance of winning \$2000

L. You will be given some unknown amount of money

What is the smallest amount of money that you would need to be given in option L for you to select that option over taking your chances with option K?

Rules:

- Before the study began, an unknown amount between \$1000 and \$2000 was determined for option L. If this unknown amount is higher than your answer, then you will receive the unknown amount. If the unknown amount is lower than or equal to your answer, you will receive option K.
- All amounts between \$1000 and \$2000 are possible and equally likely, as the unknown amount.

Now please answer all six questions. Continue to the next page to make your decisions.

[new screen]

Decision 1: Choose between:

A. winning \$850

B. a 50% chance of winning \$100 and a 50% chance of winning \$1600

Decision 2: Choose between:

C. losing \$650

D. a 50% chance of losing \$1550, and a 50% chance of winning \$100

[new screen]

Decision 3: Consider the following:

E. You have a 50% chance of winning \$850 and a 50% chance of winning \$2350

F. You will be given some unknown amount of money

What is the smallest amount of money that you would need to be given in option F for you to select that option over taking your chances with option E? \_\_\_\_\_

Rules:

- Before the study began, an unknown amount between \$850 and \$2350 was determined for option F. If this unknown amount is higher than your answer, then you will receive the unknown

amount. If the unknown amount is lower than or equal to your answer, you will receive option E.

- All amounts between \$850 and \$2350 are possible and equally likely, as the unknown amount.

[new screen]

Decision 4: Consider the following:

G. You have a 50% chance of losing \$500 and a 50% chance of winning \$500

H. You win or lose some unknown amount of money

The amount of money you could lose in option H could be as much as \$500, or you could win up to \$500. What is the worst outcome that you would be willing to accept in option H and still be willing to select this over taking your chances with option G?

(Please make one entry)

losing \_\_\_\_\_[range 0 – 500]

winning \_\_\_\_\_ [range 0 – 500]

Rules:

- Before the study began, an unknown amount between “losing \$500” and “winning \$500” was determined for option H. If this unknown amount is better for you than your answer, then you will get the unknown amount. If the unknown amount is worse than or equal to your answer, you will receive option G.

- All amounts between “losing \$500” and “winning \$500” are possible and equally likely, as the unknown amount.

[new screen]

Decision 5: Consider the following:

I. You have a 50% chance of losing \$650 and a 50% chance of winning \$850

J. You win or lose some unknown amount of money

The amount of money you could lose in option J could be as much as \$650, or you could win up to \$850. What is the worst outcome that you would be willing to accept in option J and still be willing to select this over taking your chances with option I?

(Please make one entry)



losing \_\_\_\_\_ [range 0 – 650]

winning \_\_\_\_\_ [range 0 – 850]

Rules:

- Before the study began, an unknown amount between “losing \$650” and “winning \$850” was determined for option J. If this unknown amount is better for you than your answer, then you will get the unknown amount. If the unknown amount is worse than or equal to your answer, you will receive option I.

- All amounts between “losing \$650” and “winning \$850” are possible and equally likely, as the unknown amount.

[new screen]

Decision 6: Consider the following:

K. You have a 50% chance of winning \$1000 and a 50% chance of winning \$2000

L. You will be given some unknown amount of money

What is the smallest amount of money that you would need to be given in option L for you to select that option over taking your chances with option K? \_\_\_\_\_

Rules:

- Before the study began, an unknown amount between \$1000 and \$2000 was determined for option L. If this unknown amount is higher than your answer, then you will receive the unknown amount. If the unknown amount is lower than or equal to your answer, you will receive option K.

- All amounts between \$1000 and \$2000 are possible and equally likely, as the unknown amount.

### **Treatment 8:**

The following pages describe six decisions that you will be asked to make about winning or losing money. You will read about all six decisions before deciding how to answer them. When it is time to decide, please make your decisions as though you were actually going to win or lose the money in all six cases.

Please keep in mind that to win or lose in one decision does not make it more or less likely that you win or lose in another decision, as though the outcome of each decision were decided with a

separate coin flip.

[new screen]

Decision 1: Choose between:

- A. winning \$850
- B. a 50% chance of winning \$100 and a 50% chance of winning \$1600

Before answering, read the second decision.

Decision 2: Choose between:

- C. a 50% chance of losing \$1000 and a 50% chance of not winning or losing any money
- D. losing \$500
- E. a 50% chance of losing \$1000 and a 50% chance of winning \$100
- F. a 25% chance of losing \$1500, a 25% chance of losing \$500, a 25% chance of losing \$400,

and a 25% chance of winning \$600

Before answering, continue to the next page to read the third decision.

[new screen]

Decision 3: Consider the following:

G. You have a 50% chance of not winning or losing any money and a 50% chance of winning \$1000

H. You will be given some unknown amount of money

What is the smallest amount of money that you would need to be given in option H for you to select that option over taking your chances with option G?

Rules:

- Before the study began, an unknown amount between \$0 and \$1000 was determined for option H. If this unknown amount is higher than your answer, then you will receive the unknown amount. If the unknown amount is lower than or equal to your answer, you will receive option G.

- All amounts between \$0 and \$1000 are possible and equally likely, as the unknown amount.

Before answering, continue to the next page to read the fourth decision.

[new screen]

Decision 4: Consider the following:

I. You have a 50% chance of losing \$1000 and a 50% chance of not winning or losing any money

J. You will lose some unknown amount of money

What is the largest amount that you would be willing to lose in option J for you to select that option over taking your chances with option I?

Rules:

- Before the study began, an unknown amount between \$0 and \$1000 was determined for option J. If this unknown amount is lower than your answer, then you will lose the unknown amount. If the unknown amount is higher than or equal to your answer, you will receive option I.

- All amounts between \$0 and \$1000 are possible and equally likely, as the unknown amount.

Before answering, continue to the next page to read the fifth decision.

[new screen]

Decision 5: Consider the following:

K. You have a 50% chance of winning \$1500 and a 50% chance of winning \$2500

L. You will be given some unknown amount of money

What is the smallest amount of money that you would need to be given in option L for you to select that option over taking your chances with option K?

Rules:

- Before the study began, an unknown amount between \$1500 and \$2500 was determined for option L. If this unknown amount is higher than your answer, then you will receive the unknown amount. If the unknown amount is lower than or equal to your answer, you will receive option K.

- All amounts between \$1500 and \$2500 are possible and equally likely, as the unknown amount.

Before answering, continue to the next page to read the sixth and final decision.

[new screen]

Decision 6: Choose between:

M. losing \$650

N. a 50% chance of losing \$1550 and a 50% chance of winning \$100

Now please answer all six questions. Continue to the next page to make your decisions.

[new screen]

Decision 1: Choose between:

- A. winning \$850
- B. a 50% chance of winning \$100 and a 50% chance of winning \$1600

Decision 2: Choose between:

- C. a 50% chance of losing \$1000 and a 50% chance of not winning or losing any money
- D. losing \$500
- E. a 50% chance of losing \$1000 and a 50% chance of winning \$100
- F. a 25% chance of losing \$1500, a 25% chance of losing \$500, a 25% chance of losing \$400,

and a 25% chance of winning \$600

[new screen]

Decision 3: Consider the following:

G. You have a 50% chance of not winning or losing any money and a 50% chance of winning \$1000

H. You will be given some unknown amount of money

What is the smallest amount of money that you would need to be given in option H for you to select that option over taking your chances with option G? \_\_\_\_\_

Rules:

- Before the study began, an unknown amount between \$0 and \$1000 was determined for option H. If this unknown amount is higher than your answer, then you will receive the unknown amount. If the unknown amount is lower than or equal to your answer, you will receive option G.

- All amounts between \$0 and \$1000 are possible and equally likely, as the unknown amount.

[new screen]

Decision 4: Consider the following:

I. You have a 50% chance of losing \$1000 and a 50% chance of not winning or losing any money

J. You will lose some unknown amount of money

What is the largest amount that you would be willing to lose in option J for you to select that option over taking your chances with option I? \_\_\_\_\_

Rules:

- Before the study began, an unknown amount between \$0 and \$1000 was determined for option J. If this unknown amount is lower than your answer, then you will lose the unknown amount. If the unknown amount is higher than or equal to your answer, you will receive option I.

- All amounts between \$0 and \$1000 are possible and equally likely, as the unknown amount.

[new screen]

Decision 5: Consider the following:

K. You have a 50% chance of winning \$1500 and a 50% chance of winning \$2500

L. You will be given some unknown amount of money

What is the smallest amount of money that you would need to be given in option L for you to select that option over taking your chances with option K? \_\_\_\_\_

Rules:

- Before the study began, an unknown amount between \$1500 and \$2500 was determined for option L. If this unknown amount is higher than your answer, then you will receive the unknown amount. If the unknown amount is lower than or equal to your answer, you will receive option K.

- All amounts between \$1500 and \$2500 are possible and equally likely, as the unknown amount.

[new screen]

Decision 6: Choose between:

M. losing \$650

N. a 50% chance of losing \$1550 and a 50% chance of winning \$100

### **Mathematics module:**

The following screens ask you to answer some numerical problems. Please answer the questions as well as you can, without asking other people for help or using a calculator. Do not worry about potentially getting some answers wrong, as these are challenging questions.

(1) What is 15% of 1000? \_\_\_\_\_

(2) A car rental agency charges \$35 a day plus \$0.14 per mile for its rental cars. If these charges include tax, what is the total cost of traveling 300 miles over 3 days in a car rented from this agency?

- a. \$42
- b. \$105
- c. \$125
- d. \$147
- e. \$300

(3) A TV and a radio cost \$110 in total. The TV costs \$100 more than the radio. How much does the radio cost? \_\_\_\_\_

(4) How many years of mathematics education did you receive in high school?

(5) Did you take a mathematics course in college?

- a. Yes
- b. No
- c. Do not know