

# Instructions

**GROUP NUMBER:** \_\_\_\_\_

## **Welcome.**

Welcome and thank you for participating. Just for agreeing to participate you will automatically be given \$5 as a “thank you” payment. Anything else you earn today will be in addition to this.

## **Your Group Number**

Your name will never be recorded in this study, or revealed to anyone. Instead, you will be known by your Group Number. This number is shown above.

## **Your Partner**

You will be paired with another person in the room today. We’ll call this person your partner. The decisions made today will concern how much money you and your partner earn.

Before we tell you about the decisions, we will take a minute to introduce you to your partner. You and your partner have the same Group Number, but are sitting on opposite sides of the room.

We’ll start at the front of the room. We will first ask the two in Group Number 1 to stand and face each other. Then each should say to their partner, “Hello. I am in Group Number 1. I am your partner.” We’ll then ask Group 2 to do the same, and will repeat this for all groups.

Begin now with Group Number 1.

*Please wait until all introductions are done before turning the page...*

## Your Task

Your group has been given \$20 to divide between the two of you. Although you and your partner are in the same group, only one of the two partners will have responsibility for deciding for how to divide the \$20.

Before the study today, we randomly selected those on the right/left side of the room as the ones who make decisions, while those on the left/right must accept the decisions made by their partners.

Even though only one of you makes decisions, it is very important for everyone to understand how decisions will be made, so please pay attention to all of the instructions.

Here's the basic procedure you'll use to divide up the \$20.

The decision making partner will roll a die. ***None of the other participants in this study will see what number he/she rolls.*** Depending on the roll of the die, one of the following two things will happen:

EITHER...

- We'll let the decision making partner chose a division of the \$20 by filling in a line like the following:

“Divide \$20: I allocate \_\_\_\_\_ to myself, and \_\_\_\_\_ to my partner.”

Notice that the amounts in the two blank spaces must sum to \$20.

***No one here will see what this person writes – not even his/her partner.***

OR...

- We will automatically allocate \$20 to one partner and \$0 to the other partner. Someone in another room will flip a coin to determine which partner gets \$20 and which get \$0.

***Everyone in this room will know how the \$20 was divided between the two partners in each group. But no one will be told whether the decision making partner made this choice, or whether we made it automatically. No one will be told what number the deciding partner rolled, or whether the coin flip came up heads or tails.***

Thinking about this from the point of view of the decision maker:

- If your division is \$20 for yourself and \$0 for your partner, no one will know whether this was your choice, or our choice.
- Likewise, if your division is \$0 for yourself and \$20 for your partner, no one will know whether this was your choice, or our choice.

- However, if you choose any other division – say \$2, \$10, or \$15 for yourself and the rest for your partner – everyone will be able to figure out that you are responsible for this choice.

Thinking about this from the point of view of the other partner:

- If you are allocated \$0, you won't know whether your partner made this choice, or whether we made it.
- Likewise, if you are allocated \$20, you won't know whether your partner made this choice, or whether we made it
- However, if you are allocated any other amount – say \$2, \$10, or \$15 – you'll know that your partner is responsible for this choice.

Thinking about this from the point of view of everyone else in the room:

- If you see that a decision maker is allocated \$0, you won't know whether he/she made this choice, or whether we made it.
- Likewise, if you see that a decision maker is allocated \$20, you won't know whether he/she made this choice, or whether we made it.
- However, if any partner receives any other amount – say \$2, \$10, or \$15 – you'll know that the decision making partner is responsible for this choice.

## The Decision Sheets

The decision maker will actually see nine sheets, with nine different decisions. These sheets are contained in the envelope marked “Blanks.” All of the decisions have the same form as the one we’ve just described. The only difference is that, for some decisions, the odds that the decision making partner gets to make a choice are higher than for others.

***Only one of these decisions will count.*** After all decisions are made we will randomly select one of the nine decision sheets and use only that one decision sheet to determine payments. It makes good sense, therefore, to make each decision as though it will actually be carried out.

We’re going to start with the dice rolls. One by one, each decision maker will come to the front of the room, carrying the envelope containing the blank decision sheets. There he will roll a die until a number from 1 to 4 comes up. The number on the die will be his *private number*. To make sure he doesn’t forget this number, he’ll write it on each decision sheet before returning to his station. ***No one else will see this number.***

Here is what one of the Decision Sheets may look like:

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Decision Sheet 7

My group number is 5

My private number is \_\_\_\_\_

Private Numbers 1 and 2 make a choice:

“Divide \$20: I allocate \_\_\_\_\_ to myself, and \_\_\_\_\_ to my partner.”

Private Numbers 3 and 4: we are forcing you to make this choice:

Write “forced” on this line: \_\_\_\_\_

If the coin flip is Heads:

“Divide \$20: I allocate \$20 to myself, and \$0 to my partner.”

If the coin flip is Tails:

“Divide \$20: I allocate \$0 to myself, and \$20 to my partner.”

Features of the decision sheet we will report to your partner:

Odds of an intended decision: 2 in 4 (50%)

Odds of a forced decision: 2 in 4 (50%)

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As you can see, on this Decision Sheet those who have drawn a private number of 1 or 2 actually get to make a choice. Those who have drawn 3 or 4 don't. For these subjects we will have someone outside of this room flip a coin. If the coin turns up heads, we force the decision maker to allocate all \$20 to him/herself and \$0 to his/her partner. However, if the coin turns up tails, we force the decision maker to allocate all \$20 to his/her partner and \$0 to him/herself. ***We won't tell anyone whether we've flipped a coin, or the result of the coin flip.***

Here, the odds are 2 in 4 (50%) that a decision maker makes a choice, and 2 in 4 (50%) that his choice is forced.

When we ask the decision makers to fill in this decision sheet, those with private numbers 1 and 2 will fill in their decisions. Those with private numbers 3 and 4 will just write “forced” on the line provided. This is to make sure everyone is writing something, so that no one can figure out your private number based on whether or not you're writing. (If someone who should not be making a decision mistakenly fills in a decision, we will ignore it.)

At the end of the experiment, everyone will know which decision sheet was used, and what the payment was to every person. However, no one will know any decision maker's private number, or whether the decision was forced, or whether the coin landed on heads or tails. We'll just write the features of the selected decision sheet and the outcomes on the board. That may look something like this:

Selected Decision Sheet:                    7  
Odds of an intended decision: 2 in 4 (50%)  
Odds of a forced decision:    2 in 4 (50%)

Group 1	Decision maker - \$10	Partner - \$10
Group 2	Decision maker - \$20	Partner - \$0
Group 3	Decision maker - \$0	Partner - \$20
Group 4	Decision maker - \$18	Partner - \$2
Group 5 ...and so forth.		

Though people will not be told whose decisions were forced and whose were not, they may be able to figure this out from choices. For example, if the results above came from the sample decision sheet we just saw, it would be clear that:

- The choice for the decision makers in groups 1 and 4 were definitely not forced. Since the allocation was *not* for one of the two partners to get \$20 and one to get \$0, the decision must have been intended. However,
- The choice for the decision maker in group 2 may or may not have been forced. Either he voluntarily chose \$20 for himself and \$0 for his partner, or we forced his choice and the coin we flipped for group 2 landed on Heads.
- The choice for the decision maker in group 3 may or may not have been forced. Either he voluntarily chose \$0 for himself and \$20 for his partner, or we forced his choice and the coin we flipped for group 3 landed on Tails.

To say this differently, imagine you are *not* the decider. If the allocation leaves both players something between \$0 and \$20, you know for sure that this choice was made by the decision maker. However, if the allocation leaves one player \$20 and one \$0, this can be for two reasons. First, the decision maker could have voluntarily chosen this allocation. Second, the decision maker could have chosen something else, but instead we applied the forced choice.

Here's another example Decision Sheet:

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Decision Sheet 1

My group number is 3

My private number is \_\_\_\_\_

Private Numbers 1, 2, 3, and 4 make a choice:

“Divide \$20: I allocate \_\_\_\_\_ to myself, and \_\_\_\_\_ to my partner.”

There is no forced choice.

Features of the decision sheet we will report to your partner:

Odds of an intended decision: 4 in 4 (100%)

Odds of a forced decision: 0 in 4 (0%)

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In this case there is no forced choice. If this is the decision sheet we select for payments, once again we'll write the outcomes on the board. In this case, everyone will know that every decision maker actually chose the outcome for his/her group.

Here is one more example Decision Sheet:

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Decision Sheet 8

My group number is 6

My private number is \_\_\_\_\_

Private number 3 makes a choice:

“Divide \$20: I allocate \_\_\_\_\_ to myself, and \_\_\_\_\_ to my partner.”

Private numbers 1, 2, and 4: we are forcing you to make this choice:

Write “forced” on this line: \_\_\_\_\_

If the coin flip is Heads:

“Divide \$20: I allocate \$20 to myself, and \$0 to my partner.”

If the coin flip is Tails:

“Divide \$20: I allocate \$0 to myself, and \$20 to my partner.”

Features of the decision sheet we will report to your partner:

Odds of an intended decision: 1 in 4 (25%)

Odds of a forced decision: 3 in 4 (75%)

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Note that this is a lot like the first example except here the odds are 1 in 4 that a decision maker makes a choice, and 3 in 4 that his decision is forced.

If this is the decision selected for payments, once again we’ll write the features of the sheet and the outcomes on the board. It may look something like this:

Decision Sheet: 8  
Odds of an intended decision: 1 in 4 (25%)  
Odds of a forced decision: 3 in 4 (75%)

Group 1	Decision maker - \$10	Partner - \$10
Group 2	Decision maker - \$20	Partner - \$0
Group 3	Decision maker - \$9.10	Partner - \$10.90
Group 4	Decision maker - \$18	Partner - \$2
Group 5 ...and so forth.		

Again, people will not be told whose decisions were forced and whose were not. As before, however, they may be able to figure this out from choices. In this example, it would be clear that:



- The choices for the decision makers in groups 1, 3, and 4 were definitely not forced. Since both people got an allocation between \$0 and \$20, this must have been intended. However,
- The choice for the decision maker in group 2 may or may not have been forced. Either the decision maker voluntarily chose to take \$20, or we used the forced choice and the coin flip for group 2 landed on heads.

To say this differently, imagine you are the decision maker and are using the decision sheet above. Suppose that your choice is \$19 for yourself and \$1 for your partner. Then you can be sure that when your partner sees the allocation he will know that you are responsible for this division. Suppose, instead, that you chose \$20 for yourself and \$0 for your partner. Then your partner will definitely be told that he/she will get \$0 but he/she will never know for sure whether you voluntarily chose \$20 for yourself or were forced to do it.

Finally, imagine you are the decision maker and that we are using a decision sheet where you do *not* get to make a choice. Then, depending on the result of the coin toss, your partner will either be told the allocation is \$20 for you and \$0 for him/her, or \$0 for you and \$20 for him/her. But your partner will never know whether the allocation was chosen by you or whether it was the forced decision.

## **Some procedures**

We will go through each Decision Sheet together. When we begin, we will ask you to take the top Decision Sheet from the envelope marked “Blanks.” We will show this on the overhead. Make a decision if you are free to do so, or write “forced” in the designated line if you are not. When you are done, put the completed Decision Sheet in the envelope marked “Complete.” When everyone is done, we will then turn to the next Decision Sheet.

When we have finished all of the Decision Sheets, we will randomly choose a number to determine which Decision Sheet will apply. You will take this Decision Sheet – and **ONLY** this sheet -- out of the envelope marked “Complete,” and put it in the envelope marked “Selected.”

You will then seal both envelopes, and we will collect them.

The envelope marked “Complete,” which will contain all the Decision Sheets we are NOT using, will be opened much later, and the person opening it won’t have any idea who filled these sheets out. ***No one here will see the unused sheets.***

We will hand the envelopes marked “Selected” to an assistant who is not currently in this room. The assistant will compile the results, put the payments in envelopes, return all of this to me, and then leave. ***No one else will see the selected decision sheet.***

We will then write the odds of a forced choice and the outcome for each group on the board. Remember, though, that we won’t indicate whether or not any decision was forced. Then we’ll hand the payments out, calling the groups one by one. After that, you will all be free to leave.

## Summary:

- Each group has been given \$20 to divide between the two partners.
- One person in a group will get to make decisions.
- Every decision maker will have a randomly chosen private number, which only they will know.
- There are 9 Decision Sheets. For each sheet, depending on a person's private number, they will either be free to make a choice, or their decision will be forced.
- If their decision is forced, we will flip a coin for that group to determine whether the allocation will be \$20 for the decision maker and \$0 for the partner (Heads), or \$0 for the decision maker and \$20 for the partner (Tails).
- After all decisions are made we will randomly choose one of the decision sheets to determine payments. Everyone will know which decision sheet we've chosen.
- If a person *voluntarily* chooses \$20 for one person and \$0 for the other, there is no way for their partner or anyone else to tell whether their particular decision was made or forced.
- If a person *voluntarily* chooses something different from \$20 for one person and \$0 for the other, then their partner and everyone can be sure that this is the choice they intended.
- Before we give you your payment envelopes, we will write on the board both the features of the selected decision sheet and all of the final payments to all participants, by Group Number.

We can begin by asking the decision maker in Group 1 to come up and roll the die to determine his/her Private Number.

## Decision Sheet 1

My group number is \_\_\_\_\_

My private number is \_\_\_\_\_

Private Numbers 1, 2, 3, and 4 make a choice:

“Divide \$20: I allocate \_\_\_\_\_ to myself, and \_\_\_\_\_ to my partner.”

There is no forced choice.

Features of the decision sheet we will report to your partner:

Odds of an intended decision: 4 in 4 (100%)

Odds of a forced decision: 0 in 4 (0%)

## Decision Sheet 2

My group number is \_\_\_\_\_

My private number is \_\_\_\_\_

Private number 3 makes a choice:

“Divide \$20: I allocate \_\_\_\_\_ to myself, and \_\_\_\_\_ to my partner.”

Private numbers 1, 2, and 4: we are forcing you to make this choice:

Write “forced” on this line: \_\_\_\_\_

If the coin flip is Heads:

“Divide \$20: I allocate \$20 to myself, and \$0 to my partner.”

If the coin flip is Tails:

“Divide \$20: I allocate \$0 to myself, and \$20 to my partner.”

Features of the decision sheet we will report to your partner:

Odds of an intended decision: 1 in 4 (25%)

Odds of a forced decision: 3 in 4 (75%)