

BOOMbox at Home

Experimenting with Game Theory

Are the people around you good at cooperating, or are they giant cheaters? Find out by experimenting with game theory.



Instructions

- After reading through the rules of the experiment on the second page, decide what your question will be and what you think the answer to the question will be. This guess will be your **hypothesis**. For example, a research question could be, "Will people cooperate or will they cheat?" A hypothesis could be, "I think everyone will choose to cooperate."
- Find six or more people to participate in your experiment. This can be anyone in your family, your friends, or classmates. These people will become your **sample**.
- Explain the rules of the experiment to the people participating in your experiment.
- Use the table provided on the second page to record their responses. These responses are your **data**. Once everyone in your sample has provided their responses, add up all the responses to see what your total results are.
- Did your results match up with your hypothesis? Why or why not? Did anything surprise you? This part will be your **data analysis**.

Want to explore more?

- Try a different experiment design to see if your results change. Expand the size of your sample or ask different people to take part. Will adults have different results than kids?
- Change the rules of the experiment to find out if that will change the results. Will making the reward bigger lead to more or less cooperation? What if the participants know who they will be working with?
- You can also design experiments to answer other questions you might have. What is the first move that people make in a game of tic-tac-toe? Run an experiment to find out.
- Game theory is the study of the strategies people use when playing games. It looks at the choices a player might make based on what they think other players will do.
- This experiment is also known as the "prisoner's dilemma," where the participants are accused of a crime and their choices are to snitch on the other person or to stay quiet. Game theorists have found that the best strategy is for everyone to be cheaters and snitch.

What will you learn today?

