

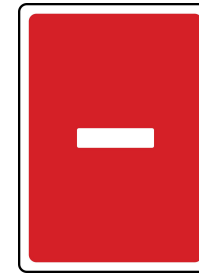
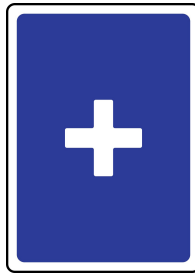


Playing the Odds



There's obviously a lot of luck involved in this game, but is it possible to use **strategy** to give yourself a better chance of getting a high score?

The one choice you get to make in this game is whether or not to flip a card over before seeing the next card. Let's think a little bit about how to make this choice.



If you draw a card and the **side facing up** has a **plus**, do you think the **other side** is more likely to be a **plus** or a **minus**? **(Circle one)**

More likely
to be a
minus

50-50 chance
of having a
plus or a
minus

More likely
to be a
plus

If you draw a card and the **side facing up** has a **minus**, what do you think the chances are that the **other side** has a **plus**? **(Circle one)**

More likely
to be a
minus

50-50 chance
of having a
plus or a
minus

More likely
to be a
plus

It's okay if you're not sure! For now, just make your best guess.



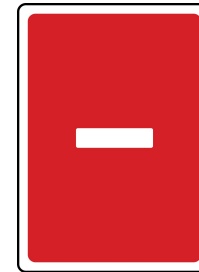
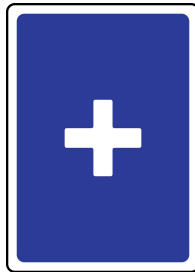
Playing the Odds



Here's one way to figure out the odds:

- Repeatedly draw a card from the bag and record whether the side facing up has a plus or a minus, then flip it over and record whether the other side has a plus or a minus

Doing this by hand would take a long time! Instead, we'll have a computer do this for us. Before running the computer simulation, **predict** what you think will happen! Then run the simulation and record what **actually** happened. Did it match your prediction?



Of the times when the **side facing up** had a **plus**, what % of the time did the **other side** have a **plus**? **(Circle one)**

Less than 45% **Between 45% and 55%** **More than 55%**

Of the times when the **side facing up** had a **minus**, what % of the time did the **other side** have a **plus**? **(Circle one)**

Less than 45% **Between 45% and 55%** **More than 55%**

Based on your results, if the side facing up has a **plus**, do you think you should **flip** the card or not? What if the side facing up has a **minus**?