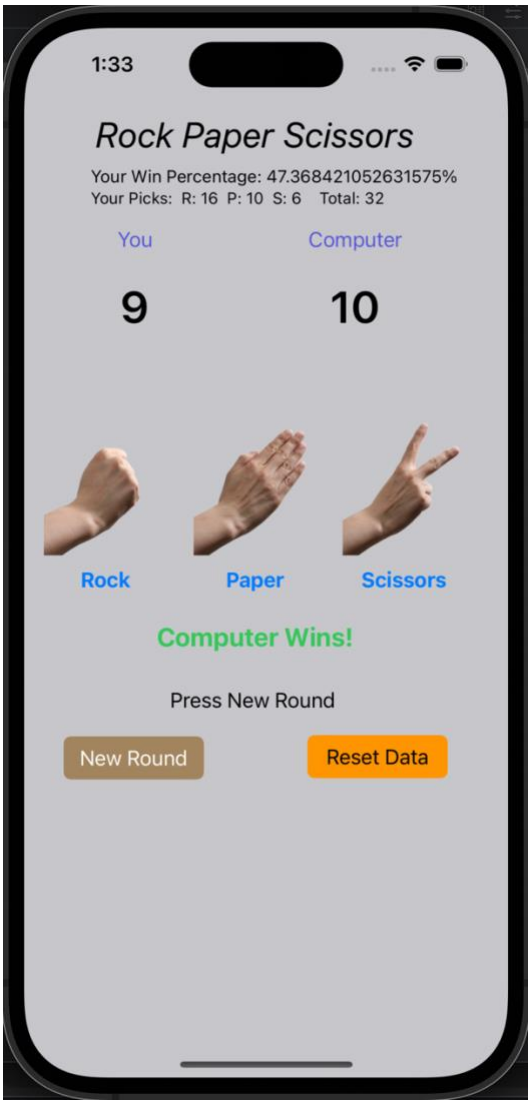
Rock Paper Scissors Activity

Is there a best strategy for winning at Rock Paper Scissors?

This activity uses an App to allow you to play many games quickly and keep track of your results. The app chooses randomly every time you choose.



Each round ends when the computer or the user wins ten times. You must click New Round to begin another round. You can reset the data at the end of each experiment.

Experiment 1: **Stay with Rock**
Play as many rounds as necessary to make your Total go up to 50, clicking Rock every time. Record your win percentage and the results of three other people (or groups).

_____ , _____ , _____ , _____

Did everyone get similar results?

Experiment 2: **Alternate between Rock and Scissors**
Play as many rounds as necessary to make your Total go up to 50, choose rock and then scissors. Record your win percentage and the results of three other people (or groups).

_____ , _____ , _____ , _____

Did everyone get similar results?

Experiment 3: **Switch When You Lose**
Play as many rounds as necessary to make your Total go up to 50, switch your choice every time you lose. Record your win percentage and the results of three other people (or groups).

_____ , _____ , _____ , _____

Did everyone get similar results?

Based on the results of the first three experiments do you think there is a strategy that will give you an advantage?

Even if you don't think there is a strategy that will give you an advantage you must try to come up with one.

Experiment 4: **Your Strategy**
Play as many rounds as necessary to make your Total go up to 50, use your strategy. Record your win percentage and the results of three other people (or groups).

_____ , _____ , _____ , _____

Did everyone get similar results?

What was your strategy?

What strategy worked best (or second best if yours was the best)?

There is a great article discussing Rock Paper Scissors at https://www.bbc.com/news/science-environment-27228416

The true probability of winning is 33.3%, did you beat the odds?