

PLAYING STRATEGY

Since the computer favors scissors, I would play rock more often. Rock smashes scissors, so by playing rock, I am more likely to win against the computer's favorite choice.

**Let's denote the probabilities of playing
rock, paper, and scissors**

For playing rock:

$$\begin{aligned} &= (1 \times P_{\text{scissors}}) + (0 \times P_{\text{paper}}) + (0 \times P_{\text{rock}}) \\ &= (1 \times 0.6) + (0 \times 0.2) + (0 \times 0.2) \\ &= 0.6 \end{aligned}$$

For playing paper:

$$\begin{aligned} &= (1 \times P_{\text{rock}}) + (0 \times P_{\text{scissors}}) + (0 \times P_{\text{paper}}) \\ &= (1 \times 0.2) + (0 \times 0.6) + (0 \times 0.2) \\ &= 0.2 \end{aligned}$$

For playing scissors:

$$\begin{aligned} &= (1 \times P_{\text{paper}}) + (0 \times P_{\text{rock}}) + (0 \times P_{\text{scissors}}) \\ &= (1 \times 0.2) + (0 \times 0.2) + (0 \times 0.6) \\ &= 0.2 \end{aligned}$$

From these calculations, we can see that playing rock has 0.6 and is the highest expected winning value.