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LAB 2

Q1. Payoff Matrix

	Rock	Paper	Scissors
Rock	0	-1	1
Paper	1	0	-1
Scissors	-1	1	0

Q2. Expected values of each alternative in scenario 1.

Use the matrix to calculate the probability.

- Rock : (0.333...* 0) + (0.333...* -1) + (0.333...* 1) = { 0 + (-0.333...) + (0.333...) } = 0
- Paper : (0.333... * 1) + (0.333... * 0) + (0.333... * -1) = { (0.333...) + 0 + (-0.333...) } = 0
- Scissors (0.333... * -1) + (0.333... * 1) + (0.333... * 0) = { (-0.333...) + (0.333...) +0 } = 0

The expected value of each alternative is the same.

Q3. Expected values of each alternative in scenario 2.

Use the matrix to calculate the probability. In scenario 2, However, rock has different probabilities.

" They tend to repeat their winning gesture more often than would be expected at random "

Therefore, the probability is rock = 0.40, paper = 0.30 , scissors = 0.30

- Rock : (0.40 * 0) + (0.30 * -1) + (0.30 * 1) = 0 - 0.30 + 0.30 = 0
- Paper : (0.40 * 1) + (0.30 * 0) + (0.30 * -1) = 0.40 + 0 - 0.30 = 0.10
- Scissors : (0.40 * -1) + (0.30 * 1) + (0.30 * 0) = -0.40 + 0.30 + 0 = -0.10

Scenario 2 shows that each value is different. The biggest value is paper.

This means that the EV(expected value) of the paper is the largest. Therefore, paper is the best choice.