

NAME: _____

P.I. A.S.18: Determine empirical probabilities based on specific samples

1. Explain how to gather data to find experimental probability.
2. Describe how you can use a frequency table to calculate experimental probabilities for a probability distribution.

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5. Make up an experiment that has this probability distribution: $P(A) = 0.25$, $P(B) = 0.1$, $P(C) = 0.05$, $P(D) = 0.6$.

[1] through observations or experiments

Answers may vary. Sample: Find the total number of outcomes listed in the frequency table. For each outcome, the experimental probability of a certain outcome is the number of times that outcome

[2] occurred divided by the total number of outcomes listed in the table.

Answers may vary. Sample: Get a paper cup and toss it a number of times, say 50. Each time, record whether it lands right side up, wrong side up or on its side. The experimental probability that the cup will land right side up is the ratio of the number of times it actually landed right side up: number of total

[3] trials.

Answers may vary. Sample: Two hundred people were asked what type of toothpaste they liked best. 46

[4] said they prefer gel.

Answers may vary. Sample: 20 cards are placed in a box. 5 have the letter A, 2 have the letter B, 1 has the letter C, and 12 have the letter D.

[5]
