

Theoretical Probability

Sample Space - the possible outcomes

Coin

Die

The integers 1 through 5 inclusive

The integers between 1 and 5

1. Find the sample space for each experiment.

a) Flipping a coin three times

b) Rolling a die twice

c) Rolling a die and flipping a coin

2. Find the probability of each.

a) A die is rolled twice. Find the probability that the sum of the rolls is a seven.

b) A die is rolled twice. Find the probability that both numbers are the same.

c) A coin is flipped three times. Find the probability of flipping three tails.

d) A coin is flipped three times. Find the probability of flipping at least one tail.

3. An integer between 1 and 50 inclusive is drawn at random. Find the probability that the integer is a multiple of 5.

4. Which has a greater probability?

$$\frac{12}{50} \text{ or } \frac{18}{74}$$