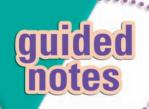
Module 20 Solving Problems Using Probability, Statistics, and Discrete Math

Lesson 2 Solving Basic Probability Problems



Lesson Objectives

- Find experimental probability.
- Find theoretical probability.
- Find the probability of the complement of an event.

Use the table on the right to answer Questions 1 and 2.

A fair die was rolled 20 times. The number of times each number landed face up is shown.



Find the experimental probability of rolling a four.

$$P(4)=\frac{1}{4}$$



Find the theoretical probability of rolling a four.

$$P(4)=\frac{1}{6}$$

	Number of times
Number	face up
1	4
2	2
3	3
4	5
5	2
6	4

Complementary events are two mutually exclusive events; one of which must happen.

Mutually exclusive events are events that cannot happen

at the same time

The formula $P(\text{not A}) = \frac{1 - P(A)}{1 - P(A)}$ is used to find the probability of the complement of an event.



The probability of winning a carnival game is $\frac{3}{25}$. Find the probability of NOT winning the game. $\frac{P(\text{not winning}) = \frac{22}{25}}{}$