Section 4-5: Probability

Probability: The measure of how likely it is something is going to happen.

Probabilities can be given as:

Ratio Percent Decimal

Two types of Probability:

Theoretical Probability

Uses your knowledge of the situation to predict the future outcome of an event.

$$\text{Theoretical Probability} = \frac{\text{\# favorable outcomes}}{\text{total possible outcomes}}$$

Experimental Probability

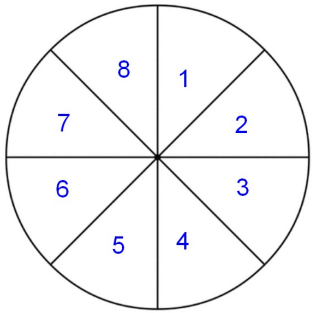
Uses the results of an experiment to predict the future outcome of an event.

$$\text{Experimental Probability} = \frac{\text{\# times an event actually occurs}}{\text{\# times experiment was done}}$$

You will spin the spinner shown one time. Find each probability as a fraction.

1. P(odd) = $\frac{4}{8}$

2. P(Multiple of 3) = $\frac{2}{8}$



A survey was conducted and the results are shown below.

Find each probability as a fraction.

□	Baseball	Football	Basketball	Hockey	Total
Men	43	57	60	12	172
Women	29	41	28	30	128
Total	72	98	88	42	300

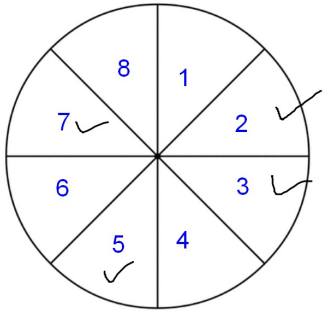
3. P(Woman who likes Hockey)= $\frac{30}{300}$

4. P(person who likes Football)= $\frac{98}{300}$

5. P(Factor of 12)= $\frac{5}{8}$

6. P(5 or 6)= $\frac{2}{8}$

7. P(prime #)= $\frac{4}{8}$



8. P(Factor of 6 and odd)= $\frac{2}{8}$

9. P(Multiple of 3 or even)= $\frac{5}{8}$