1   Lesson 1 Example 3

Many examples in this book will be based on the casino game roulette. Familiarize yourself with the roulette wheel. You win if the ball lands in a pocket that matches your bet.

- What is the probability that you win if you bet on red?

- What is the probability that you win if you bet on the number 10?

- What is the probability that you win if you bet on odd (i.e., that the number is odd)?

2   Answer

1. **Probability that you win if you bet on red:**

There are 18 red pockets out of 38 total pockets.

$$\text{Probability} = \frac{18}{38} = \frac{9}{19}$$

2. **Probability that you win if you bet on the number 10:**

There is 1 pocket numbered 10 out of 38 total pockets.

$$\text{Probability} = \frac{1}{38}$$

3. **Probability that you win if you bet on an odd number:**

There are 18 odd numbers out of 38 total pockets.

$$\text{Probability} = \frac{18}{38} = \frac{9}{19}$$