

## 12-5 Skills Practice

## Adding Probabilities

Eli has 10 baseball cards of 10 different players in his pocket. Three players are pitchers, 5 are outfielders, and 2 are catchers. If Eli randomly selects a card to trade, find each probability.

1.  $P(\text{pitcher or outfielder})$

$$\frac{3}{10} + \frac{5}{10} = \frac{8}{10} = \boxed{\frac{4}{5}}$$

2.  $P(\text{pitcher or catcher})$

$$\frac{3}{10} + \frac{2}{10} = \frac{5}{10} = \boxed{\frac{1}{2}}$$

3.  $P(\text{outfielder or catcher})$

$$\frac{5}{10} + \frac{2}{10} = \boxed{\frac{7}{10}}$$

A die is rolled. Find each probability.

4.  $P(5 \text{ or } 6)$

$$\frac{1}{6} + \frac{1}{6} = \frac{2}{6} = \boxed{\frac{1}{3}}$$

5.  $P(\text{at least a } 3)$

$$P(3) + P(4) + P(5) + P(6) = \frac{1}{6} + \frac{1}{6} + \frac{1}{6} + \frac{1}{6} = \boxed{\frac{2}{3}}$$

6.  $P(\text{less than } 4)$

$$\frac{1}{6} + \frac{1}{6} + \frac{1}{6} = \frac{3}{6} = \boxed{\frac{1}{2}}$$

Determine whether the events are *mutually exclusive* or *inclusive*. Then find the probability.

ME

7. A die is rolled. What is the probability of rolling a 3 or a 4?  $\frac{1}{6} + \frac{1}{6} = \frac{2}{6} = \boxed{\frac{1}{3}}$

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8. A die is rolled. What is the probability of rolling an even number or a 4?  $\frac{3}{6} + \frac{1}{6} - \frac{1}{6} = \frac{3}{6} = \boxed{\frac{1}{2}}$

ME

9. A card is drawn from a standard deck of cards. What is the probability of drawing a king or a queen?  $\frac{4}{52} + \frac{4}{52} = \frac{8}{52} = \boxed{\frac{2}{13}}$

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10. A card is drawn from a standard deck of cards. What is the probability of drawing a jack or a heart?  $\frac{4}{52} + \frac{13}{52} - \frac{1}{52} = \frac{16}{52} = \boxed{\frac{4}{13}}$

11. The sophomore class is selling Mother's Day plants to raise money. Susan's prize for being the top seller of plants is a choice of a book, a CD, or a video. She can choose from 6 books, 3 CDs, and 5 videos. What is the probability that Susan selects a book or a CD?

$$\frac{6}{14} + \frac{3}{14} = \boxed{\frac{9}{14}}$$