

6.6 Practice Problems

Name _____

MULTIPLE CHOICE. Choose the one alternative that best completes the statement or answers the question.

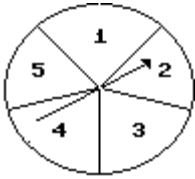
Find the indicated probability.

- 1) If $P(A) = 0.3$, $P(B) = 0.6$, and $P(A \text{ and } B) = 0.1$, find $P(A \text{ or } B)$. 1) _____
A) $P(A \text{ or } B) = 0.8$ B) $P(A \text{ or } B) = 0.9$ C) $P(A \text{ or } B) = 0.7$ D) $P(A \text{ or } B) = 1$
- 2) If $P(A) = 0.5$, $P(B) = 0.4$, and $P(A \text{ or } B) = 0.7$, find $P(A \text{ and } B)$. 2) _____
A) $P(A \text{ and } B) = 0.9$ B) $P(A \text{ and } B) = 0.1$
C) $P(A \text{ and } B) = 0.7$ D) $P(A \text{ and } B) = 0.2$
- 3) If $P(B) = 0.5$, $P(A \text{ or } B) = 0.3$, and $P(A \text{ and } B) = 0.6$, find $P(A)$. 3) _____
A) $P(A) = 0.6$ B) $P(A) = 0.8$ C) $P(A) = 0.4$ D) $P(A) = 0.5$
- 4) If $P(A) = 0.2$, $P(A \text{ or } B) = 0.5$, and $P(A \text{ and } B) = 0.3$, find $P(B)$. 4) _____
A) $P(B) = 0.7$ B) $P(B) = 0.8$ C) $P(B) = 0.4$ D) $P(B) = 0.6$
- 5) If $P(A) = 0.2$, $P(B) = 0.3$, and $P(A \text{ and } B) = 0$, find $P(A \text{ or } B)$. 5) _____
A) $P(A \text{ or } B) = 0.3$ B) $P(A \text{ or } B) = 0.7$ C) $P(A \text{ or } B) = 0$ D) $P(A \text{ or } B) = 0.5$

Find the probability.

- 6) A 6-sided die is rolled. What is the probability of rolling a 3 or a 5? 6) _____
A) $\frac{1}{3}$ B) 2 C) $\frac{1}{36}$ D) $\frac{1}{6}$
- 7) A card is drawn from a well-shuffled deck of 52 cards. What is the probability of drawing an ace or a 8? 7) _____
A) $\frac{13}{2}$ B) 9 C) $\frac{2}{13}$ D) $\frac{9}{26}$
- 8) A card is drawn from a well-shuffled deck of 52 cards. What is the probability of drawing a face card or a 6? 8) _____
A) $\frac{48}{52}$ B) $\frac{4}{13}$ C) 16 D) $\frac{2}{13}$
- 9) A lottery game has balls numbered 0 through 9. What is the probability of selecting an even numbered ball or a 5? 9) _____
A) $\frac{2}{5}$ B) $\frac{3}{5}$ C) 5 D) 2
- 10) Each of ten tickets is marked with a different number from 1 to 10 and put in a box. If you draw a ticket from the box, what is the probability that you will draw 2, 5, or 1? 10) _____
A) $\frac{1}{5}$ B) $\frac{3}{10}$ C) $\frac{1}{10}$ D) $\frac{1}{2}$

11)



11) _____

What is the probability that the arrow will land on 3 or 1?

- A) 1 B) $\frac{3}{5}$ C) $\frac{1}{5}$ D) $\frac{2}{5}$

12) One digit from the number 1,979,669 is written on each of seven cards. What is the probability of drawing a card that shows 1 or 6?

12) _____

- A) $\frac{1}{7}$ B) $\frac{3}{7}$ C) $\frac{2}{7}$ D) $\frac{9}{7}$

Solve the problem.

13) A single die is rolled one time. Find the probability of rolling an odd number or a number less than 3.

13) _____

- A) $\frac{2}{3}$ B) $\frac{1}{3}$ C) $\frac{5}{6}$ D) $\frac{1}{2}$

14) A single die is rolled one time. Find the probability of rolling a number greater than 2 or less than 5.

14) _____

- A) $\frac{1}{6}$ B) $\frac{1}{3}$ C) 1 D) $\frac{1}{4}$

15) One card is selected from a deck of cards. Find the probability of selecting a black card or a king.

15) _____

- A) $\frac{7}{13}$ B) $\frac{1}{26}$ C) $\frac{27}{52}$ D) $\frac{15}{26}$

16) One card is selected from a deck of cards. Find the probability of selecting a red card or a card less than 7. (Note: The ace is considered a low card.)

16) _____

- A) $\frac{10}{13}$ B) $\frac{9}{13}$ C) $\frac{41}{52}$ D) $\frac{19}{26}$

17) One card is selected from a deck of cards. Find the probability of selecting a red card or a heart .

17) _____

- A) $\frac{1}{4}$ B) $\frac{1}{2}$ C) 0 D) $\frac{3}{4}$

18) One card is selected from a deck of cards. Find the probability of selecting a diamond or a card less than 4 . (Note: The ace is considered a low card.)

18) _____

- A) $\frac{19}{52}$ B) $\frac{1}{2}$ C) $\frac{11}{26}$ D) $\frac{21}{52}$

19) A card is drawn at random from a well-shuffled deck of 52 cards. What is the probability of drawing a face card or a spade?

19) _____

- A) $\frac{6}{13}$ B) $\frac{1}{2}$ C) $\frac{11}{26}$ D) $\frac{25}{52}$

- 20) A card is drawn at random from a well-shuffled deck of 52 cards. What is the probability of drawing a face card or a red card? 20) _____
 A) $\frac{8}{13}$ B) $\frac{9}{13}$ C) $\frac{19}{26}$ D) $\frac{15}{26}$
- 21) Of the 43 people who answered "yes" to a question, 12 were male. Of the 85 people who answered "no" to the question, 8 were male. If one person is selected at random from the group, what is the probability that the person answered "yes" or was male? 21) _____
 A) 0.398 B) 0.156 C) 0.492 D) 0.279
- 22) A survey of senior citizens at a doctor's office shows that 40% take blood pressure-lowering medication, 47% take cholesterol-lowering medication, and 13% take both medications. What is the probability that a senior citizen takes either blood pressure-lowering or cholesterol-lowering medication? 22) _____
 A) 1 B) 0 C) 0.87 D) 0.6 E) 0.74

Find the probability.

- 23) If 82% of scheduled flights actually take place and cancellations are independent events, what is the probability that 3 separate flights will take place? 23) _____
 A) 0.82 B) 0.55 C) 0.01 D) 0.67
- 24) If you are dealt two cards successively (with replacement of the first) from a standard 52-card deck, find the probability of getting a heart on the first card and a diamond on the second. 24) _____
 A) $\frac{1}{169}$ B) $\frac{1}{16}$ C) $\frac{13}{204}$ D) $\frac{1}{204}$
- 25) A family has five children. The probability of having a girl is $\frac{1}{2}$. What is the probability of having 2 girls followed by 3 boys? 25) _____
 A) 0.0313 B) 0.3125 C) 0.6252 D) 0.1875
- 26) A family has five children. The probability of having a girl is $\frac{1}{2}$. What is the probability of having no girls? 26) _____
 A) 0.0313 B) 0.1563 C) 0.0625 D) 0.3126
- 27) If you are dealt two cards successively (with replacement of the first) from a standard 52-card deck, find the probability of getting a face card on the first card and an ace on the second. 27) _____
 A) $\frac{4}{13}$ B) $\frac{9}{169}$ C) $\frac{3}{169}$ D) $\frac{4}{221}$
- 28) If a fair coin is tossed three times, find the probability of getting heads on the first toss and tails on the second and third tosses. 28) _____
 A) $\frac{1}{4}$ B) $\frac{1}{8}$ C) $\frac{3}{8}$ D) $\frac{1}{6}$
- 29) In one town, 47% of all voters are Democrats. If two voters are randomly selected for a survey, find the probability that they are both Democrats. 29) _____
 A) 0.940 B) 0.221 C) 0.470 D) 0.216

- 30) Find the probability of correctly answering the first 3 questions on a multiple choice test if random guesses are made and each question has 4 possible answers. 30) _____
 A) $\frac{1}{64}$ B) $\frac{1}{81}$ C) $\frac{3}{4}$ D) $\frac{4}{3}$
- 31) A basketball player hits three-point shots 46% of the time. If she takes 4 shots during a game, what is the probability that she hits all 4 shots? 31) _____
 A) 11.5% B) 4.5% C) 46% D) 92%
- 32) A basketball player hits three-point shots 45% of the time. If she takes 4 shots during a game, what is the probability that she misses the first shot and hits the last three shots? 32) _____
 A) 4.1% B) 41% C) 50.1% D) 5%
- 33) Elise has put 5 cans (all of the same size) on her kitchen counter; 2 cans of vegetables, 2 cans of soup, and 1 can of peaches. Her son, Ryan, takes the labels off the cans and throws them away. Elise then chooses 2 cans (without replacement) at random to open. Find the probability that she will open at least 1 can of soup. 33) _____
 A) $\frac{4}{5}$ B) $\frac{3}{5}$ C) $\frac{9}{10}$ D) $\frac{7}{10}$
- 34) You are dealt two cards successively (without replacement) from a shuffled deck of 52 playing cards. Find the probability that both cards are black. 34) _____
 A) $\frac{25}{102}$ B) $\frac{13}{51}$ C) $\frac{1}{2652}$ D) $\frac{25}{51}$
- 35) You are dealt two cards successively (without replacement) from a shuffled deck of 52 playing cards. Find the probability that the first card is a king and the second card is a queen. 35) _____
 A) $\frac{1}{663}$ B) $\frac{4}{663}$ C) $\frac{2}{13}$ D) $\frac{13}{102}$
- 36) An IRS auditor randomly selects 3 tax returns (without replacement) from 47 returns of which 5 contain errors. What is the probability that she selects none of those containing errors? 36) _____
 A) 0.708 B) 0.0012 C) 0.7136 D) 0.0006
- 37) Two marbles are drawn without replacement from a box with 3 white, 2 green, 2 red, and 1 blue marble. Find the probability that both marbles are white. 37) _____
 A) $\frac{3}{28}$ B) $\frac{3}{32}$ C) $\frac{3}{8}$ D) $\frac{9}{56}$