Name: _____ Date: _____

1. If each outcome of an experiment is equally likely, the _____ of an event is a fraction of favorable outcomes.
    A) chances
    B) odds
    C) probability
    D) success

2. Probability may be expressed as a fraction, a decimal, or a percent.
    A) True
    B) False

3. If the event can never occur, then the probability of the event is:
    A) 0
    B) 1
    C) 1/2
    D) 2/3

4. Probability of an event not occurring = Probability of event occurring – 1.
    A) True
    B) False

5. Suppose A and B are two events. Then $P(A$ or $B) = $ _____.
    A) $P(A) + P(B) + P(A$ and $B)$
    B) $P(A) + P(B) – P(A$ and $B)$
    C) $P(A) – P(B) + P(A$ and $B)$
    D) $P(A) – P(B) – P(A$ and $B)$

6. Express the probability 1/4 as a percent:
    A) 10%
    B) 40%
    C) 25%
    D) 14%

7. A city study finds that the probability of a car running a red light at a certain intersection during any given day is 9.6%. What is the probability that a car will not run the red light on a given day?
   A) 8.6%
   B) 96.0%
   C) 4.0%
   D) 90.4%

8. Michael and Surrey are planning to have three children. Assuming it is equally likely for a boy or a girl to be born, what is the probability that at least one of their children will be a boy?
   A) 1/8
   B) 3/8
   C) 5/8
   D) 7/8

9. Suppose there are seven jelly beans in a bowl—three red and four blue. If a jelly bean is selected at random, what is the probability that it is blue?
   A) 2/7
   B) 3/7
   C) 4/7
   D) 5/7

10. Suppose there are 15 jelly beans in a bowl—3 green, 5 blue, and 7 red. A jelly bean is selected at random. What is the probability the jelly bean is not blue?
    A) 1/3
    B) 2/3
    C) 7/15
    D) 8/15

11. Suppose you pick a marble from a box containing five red and seven blue marbles. You record the color and put the marble back in the box. What is the probability of getting a red marble both times if you do this twice?
    A) 5/12
    B) 4/11
    C) 25/144
    D) 5/33

12. Suppose a coin is tossed three times. What is the total possible number of outcomes?
    A) 2
    B) 4
    C) 6
    D) 8

13. The probability of passing Professor Avila's math class is 65%, the probability of passing Professor Reid's biology class is 45%, and the probability of passing both is 25%. What is the probability of passing one or the other?
    A) 75%
    B) 85%
    C) 70%
    D) 110%

14. Suppose the inside bottom of a box is painted with three colors: 1/3 of the bottom area is blue, 1/6 is red, and 1/2 is yellow. If you toss a tiny pebble into the box without aiming, what is the probability the pebble will not land on the color blue?
    A) 2/3
    B) 1/3
    C) 5/6
    D) 1/2

15. You have six socks in your drawer, three brown and three black. You get up early in the morning, while it is still dark, reach into your drawer, and grab two socks without looking. What is the probability that the socks are the same color?

16. Suppose you pick a marble from a box containing five red and seven blue marbles. You record the color and put the marble back in the box. What is the probability of getting a blue marble each time if you do this three times?