

Name: \_\_\_\_\_ Date: \_\_\_\_\_

- Two dice are rolled. Find the probability of getting a 5 on either die or the sum of both dice is 5.  
A)  $11/36$  B)  $1/6$  C)  $7/18$  D)  $1/3$
- How many ways can a person select four books, two CDs, and one DVD from ten books, twenty CDs, and five DVDs?  
A) 8,000 B) 405 C) 6,724,520 D) 199,500
- The odds against an event are 9:8. Find the probability that the event will occur.  
A)  $\frac{8}{9}$  B)  $\frac{8}{17}$  C)  $\frac{9}{17}$  D)  $\frac{9}{8}$
- If a die is rolled one time, find the probability of getting a number greater than 0.  
A)  $1/6$  B) 0 C) 1 D)  $5/6$
- In a shop there are 20 customers, 18 of whom will make a purchase. If three customers are selected, one at a time, at random, what is the probability that all will make a purchase?  
A) 0.7717 B) 0.7605 C) 0.8524 D) 0.8808
- A single card is drawn from a deck. Find the probability of selecting a 3 or a club.  
A)  $7/52$  B)  $17/52$  C)  $4/13$  D)  $9/26$
- A single card is drawn from an ordinary 52-card deck. Find the probability of getting a heart and a jack.  
A)  $1/13$  B)  $1/26$  C)  $4/13$  D)  $1/52$

8. How many 3-digit codes using the digits 0 through 9 are possible if repetitions are allowed?
- A) 504 B) 729 C) 30 D) 1000
9. The odds in favor of an event are 10:1. Find the probability that the event will occur.
- A)  $\frac{9}{11}$  B)  $\frac{10}{11}$  C)  $\frac{1}{10}$  D)  $\frac{9}{10}$
10. In a classroom, the students are 12 boys and 6 girls. If one student is selected at random, find the probability that the student is a girl.
- A)  $\frac{2}{3}$  B)  $\frac{1}{6}$  C)  $\frac{1}{3}$  D)  $\frac{1}{2}$
11. A single card is drawn from a deck. What is the probability of getting a queen or a king?
- A)  $\frac{3}{52}$  B)  $\frac{1}{13}$  C)  $\frac{7}{52}$  D)  $\frac{2}{13}$
12. A box contains five blue, eight green, and three yellow marbles. If a marble is selected at random, what is the probability that it is yellow?
- A)  $\frac{3}{16}$  B)  $\frac{3}{8}$  C) 1 D)  $\frac{1}{3}$
13. If two people are selected at random, what is the probability that they were both born in May?
- A)  $\frac{1}{6}$  B)  $\frac{1}{132}$  C)  $\frac{1}{12}$  D)  $\frac{1}{144}$
14. When a single card is drawn from a shuffled deck of cards, find the odds against getting a 9.
- A) 1:12 B) 12:1 C) 51:1 D) 1:51

15. A box contains five blue, eight green, and three yellow marbles. If a marble is selected at random, what is the probability that it is not blue?
- A)  $1/11$  B)  $5/16$  C)  $11/16$  D)  $1/5$
16. Four red cards are numbered 1, 2, 3, and 4. Three black cards are numbered 5, 6, and 7. The cards are placed in a box and one card is selected at random. What is the probability that a red card was selected given that the number on the card was an even number?
17. A single card is drawn from an ordinary 52-card deck. Find the probability of getting a black card.
18. At a community college, there are 8 English instructors, 2 math instructors, and 9 history instructors. If one of these instructors is selected at random to serve on a committee, find the probability that the instructor is an English instructor or a history instructor.
19. Two dice are rolled. Find the probability of getting a sum of 3 or 8.
20. A card is selected from an ordinary deck. Find the probability that the card was a spade given that it was a face card.

21. Evaluate  ${}_{10}C_9$ .
22. The odds in favor of an event are 8:10. Find the probability that the event will occur.
23. A teacher asked her students, "Do you like strawberry ice cream?" The responses are shown in the following table.

	<b>Yes</b>	<b>No</b>	<b>Did not answer</b>
Boy	7	3	2
Girl	6	5	2

If a student is selected at random, find the probability that

- (a) the student did not answer the question.
  - (b) the student is a girl or answered "No."
  - (c) the student is a boy or answered "Yes."
24. A person rolls two dice and wins if the sum is 7. What are the odds in favor of winning? What are the odds against winning?
25. When two dice are tossed, find the odds against getting a sum of 11.



**Answer Key**

1. A
2. A
3. B
4. C
5. B
6. C
7. D
8. D
9. B
10. C
11. D
12. A
13. D
14. B
15. C
16.  $\frac{2}{3}$
17.  $\frac{1}{2}$
18.  $\frac{17}{19}$
19.  $\frac{7}{36}$
20.  $\frac{1}{4}$
21. 10
22.  $\frac{4}{9}$
23. (a)  $\frac{4}{25}$   
(b)  $\frac{16}{25}$   
(c)  $\frac{18}{25}$
24. In favor: 1:5; against: 5:1
25. 17:1