

Name: _____ Date: _____

1. How many different three letter permutations can be formed from the letters in the word *clipboard*?
A) 336 B) 544,320 C) 504 D) 729
2. A single card is drawn from a deck. Find the probability of selecting a 10 or a diamond.
A) $\frac{9}{26}$ B) $\frac{7}{52}$ C) $\frac{4}{13}$ D) $\frac{17}{52}$
3. A coin is tossed and then a die is rolled. Find the probability of getting a 5 on the die given that the coin landed tails up.
A) $\frac{1}{3}$ B) $\frac{1}{6}$ C) $\frac{1}{36}$ D) $\frac{1}{12}$
4. A lottery has one \$2000 prize, two \$1000 prizes, and ten \$500 prizes. Two thousand tickets are sold at \$5 each. Find the expectation if a person buys two tickets.
A) $-\$0.50$ B) $-\$1.00$ C) $-\$2.00$ D) $-\$0.25$
5. The odds against an event are 8:8. Find the probability that the event will occur.
A) $\frac{1}{1}$ B) $\frac{1}{1}$ C) $\frac{1}{2}$ D) $\frac{1}{2}$
6. Two dice are rolled. Find the probability of getting a sum of 6.
A) $\frac{1}{18}$ B) $\frac{5}{36}$ C) $\frac{1}{6}$ D) $\frac{1}{9}$
7. A single card is drawn from an ordinary 52-card deck. Find the probability of getting a 7 of spades.
A) $\frac{1}{13}$ B) $\frac{1}{26}$ C) $\frac{1}{4}$ D) $\frac{1}{52}$

8. 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) 1 B) $\frac{3}{16}$ C) $\frac{3}{8}$ D) $\frac{1}{3}$
9. If two people are selected at random, what is the probability that they were both born in May?
- A) $\frac{1}{132}$ B) $\frac{1}{144}$ C) $\frac{1}{12}$ D) $\frac{1}{6}$
10. Two dice are rolled. Find the probability of getting a 5 on either die or the sum of both dice is 5.
- A) $\frac{11}{36}$ B) $\frac{1}{6}$ C) $\frac{7}{18}$ D) $\frac{1}{3}$
11. In a classroom, the students are 11 boys and 1 girl. If one student is selected at random, find the probability that the student is a girl.
- A) $\frac{1}{12}$ B) $\frac{11}{12}$ C) $\frac{1}{1}$ D) $\frac{1}{11}$
12. 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) $\frac{2}{13}$
13. Two dice are rolled. Find the probability of getting a sum greater than 8.
- A) 0 B) $\frac{13}{36}$ C) $\frac{2}{9}$ D) $\frac{5}{18}$
14. A package contains 9 candy canes, 6 of which are cracked. If 2 are selected, find the probability of getting no cracked candy canes.
- A) 0.3852 B) 0.1938 C) 0.2870 D) 0.0833
15. Three coins are tossed. Find the probability that no more than one coin lands heads up.
- A) $\frac{5}{8}$ B) $\frac{1}{4}$ C) $\frac{3}{8}$ D) $\frac{1}{2}$

21. A teacher asked her students, "Do you have a computer at home?" The responses are shown in the following table.

	Yes	No	Did not answer
Boy	4	10	1
Girl	7	3	1

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."
22. How many different ways can a college select three applicants for a teaching position from a pool of 20 applicants?
23. If a 40-year-old buys a \$1500 life insurance policy at a cost of \$50 and has a probability of 0.992 of living to age 41, find the expectation of the policy until the person reaches 41.
24. When two dice are tossed, find the odds against getting a sum of 9.
25. If a die is rolled one time, find the probability of getting a number less than 4 and an even number.

Answer Key

1. C
2. C
3. B
4. B
5. D
6. B
7. D
8. B
9. B
10. A
11. A
12. D
13. D
14. D
15. C
16. $\frac{1}{4}$
17. 0.4900
18. 8
19. $\frac{3}{8}$
20. 112 outfits
21. (a) $\frac{1}{13}$
(b) $\frac{21}{26}$
(c) $\frac{11}{13}$
22. 1,140
23. -\$38
24. 8:1
25. $\frac{1}{6}$