

Name: _____

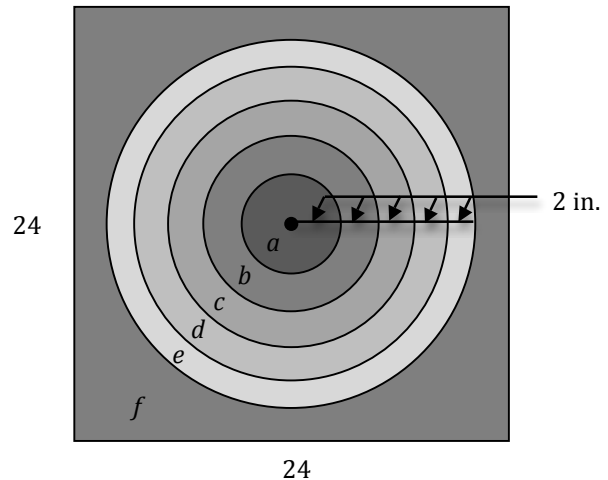
Algebra 2 10.3-10.5 Review

You have an equally likely chance of choosing any integer from 1 through 80. Find the probability of the given event:

1. An odd number is chosen. $\frac{1}{2}$
2. A number greater than 50 is chosen. $\frac{3}{8}$
3. A multiple of 3 is chosen. $\frac{13}{40}$
4. An odd number less than 70 is chosen. $\frac{7}{16}$

Find the probability that a dart thrown at the square target shown will hit the given region. Found your answer to three decimal places.

5. The center $a \approx 0.022$
6. The border $f \approx 0.455$
7. The border f or the center $a. \approx 0.477$



8. Six students of different heights are going to march in single file in a parade carrying flags. The order in which they march is to be randomly selected. What is the probability that they will march in order of height from shortest to tallest?

$$\approx 0.001389$$

9. Suppose that today there is a 55% chance of rain, a 20% chance of lightning, and a 15% chance of lightning and rain. What is the chance that we will have rain or lightning today?

$$60\%$$

10. Now suppose that today there is a 50% chance of rain, a 60% chance of rain or lightning, and a 15% chance of rain and lightning. What is the chance that we will have lightning today?

$$25\%$$

11. A jar contains 10 blue marbles, 4 red marbles, and 8 white marbles. What are the odds of drawing a blue marble from the bag?

$$\frac{5}{6} \text{ or } 5:6$$

12. A new bag of golf tees contains 10 red tees, 10 orange tees, 10 green tees and 10 blue tees. You empty the tees into your golf bag. What is the probability of grabbing out two tees of the same color in a row for you and your partner?

$$\frac{9}{39}$$

13. What is the probability that the sum of two die will be greater than 8, given that the first die is 6?

$$\frac{2}{3}$$

14. A pair of dice is rolled. Two possible events are rolling a number greater than 8 and rolling an even number. Are these two events disjoint events?

No, they're overlapping

15. A pet store has 18 light green parakeets (5 females and 13 males) and 25 sky blue parakeets (15 females and 10 males). You randomly choose one of the parakeets. What is the probability that is a male or a sky blue parakeet?

$$0.8837$$

16. You are playing a lottery in which you must correctly select 6 out of 18 numbers. If the order that you select the numbers does not matter, what is the probability that you correctly select the 6 numbers?

$$0.000054$$

17. You have 6 dimes and 4 quarters in your pocket. You take 3 coins out at random. What is the probability that the three coins will contain at least one quarter?

$$0.83$$

Consider a 10-question true-false test.

18. How many ways are there to answer the test? 1024

19. How many ways are there to score exactly 80%? That is, how many ways are there to get exactly 8 questions correct?

$$45$$

20. Find the probability of getting exactly 80% the test if you answer the questions at random.

$$\approx 4.4\%$$

21. Find the probability of getting *at least* 80% the test if you answer the questions at random.

$$\approx 5.5\%$$