

## LESSON 174 Review: Data Analysis and Probability

Try to complete as fast as you can. You may use a calculator unless otherwise specified.

1. A printer prints 25 pages in 3 minutes. What is the speed of the printer in pages per hour?

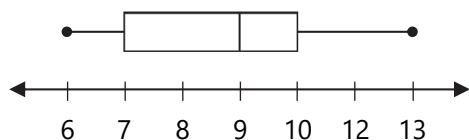
2. A car traveled 90 kilometers per hour. What was the average speed of the car in meters per second?

3. Which statement is true about the data set  $\{6, 7, 4, 5, 7, 6, 6, 7, 5, 8\}$ ?
- A) The mean is higher than the median.  
B) The mean is lower than the median.  
C) The mean is equal to the median.

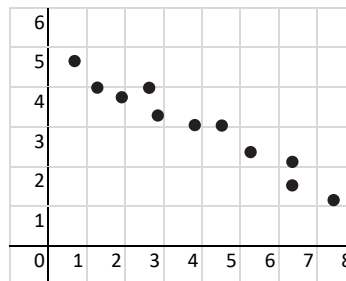
4. The mean of the data set  $\{3, x, 5, 6, 8\}$  is 5.2. What is the value of  $x$ ?

5. What is the interquartile range of the data set  $\{3, 8, 10, 5, 5, 2, 7, 8\}$ ?

6. The box plot below shows the ages of kids in a neighborhood. What percent of the kids are older than 9?



7. What is the best description of the relationship in the scatter plot below?



- A) positive correlation  
B) negative correlation  
C) no correlation

8. Which equation best models the data in the scatter plot above?

- A)  $y = 2x + 5$       B)  $y = -2x + 5$   
C)  $y = \frac{1}{2}x + 5$       D)  $y = -\frac{1}{2}x + 5$

9. A random poll of 300 registered voters in a city found that 200 of them will vote for a certain policy. If there are 9,000 registered voters in the city, what is a reasonable estimate of the number of voters who will vote for the policy?

10. A scale measures with a margin of error of 2%. If a person weighs 150 pounds on this scale, what is the range of the possible weights of this person?

11. Melissa shot 20 free throws and made 12 of them. What is the probability that Melissa makes the next shot?
12. An integer is chosen at random from 1 to 100. What is the probability that the integer is not a multiple of 10?
13. A die is rolled. What is the probability of rolling an even number or a prime number?
14. A card is drawn from a deck of 52 cards. What is the probability of drawing a red card or a face card?
15. A coin is tossed and a die is rolled. What is the probability of tossing tails and rolling an even number?
16. Two letters are chosen at random without replacement from the word MANGO. What is the probability that they will both be vowels?
17. 60 gym members are surveyed. 22 of them have taken aerobics, 20 have taken rock climbing, and 6 have taken both. What is the probability that a randomly selected member has taken neither?

18. In the survey previously described of 60 gym members, what is the probability that a randomly selected member has taken just one of the classes?
19. In the survey previously described of 60 gym members, what is the probability that a randomly selected member has taken rock climbing given that the member has taken aerobics?
20. A high school conducted a survey on a random sample of 45 students about a new school policy. The table below shows the results. What is the probability that a randomly selected student is a girl who agrees with the new policy?

	Agree	Disagree	Total
Boys	8	12	20
Girls	15	10	25
Total	23	22	45

21. In the survey above of 45 students, what is the probability that a randomly selected student disagrees with the new policy given that the student is a boy?
22. In the survey above of 45 students, if there are 900 students in the school, what is a reasonable estimate of the number of students who agree with the new policy?