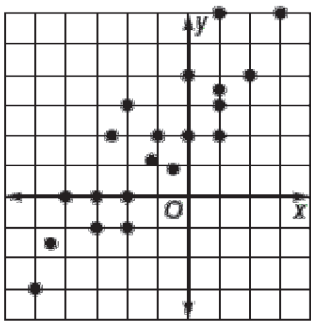


Algebra I: Chapter 12 Review Sheet

Multiple Choice

Identify the choice that best completes the statement or answers the question.

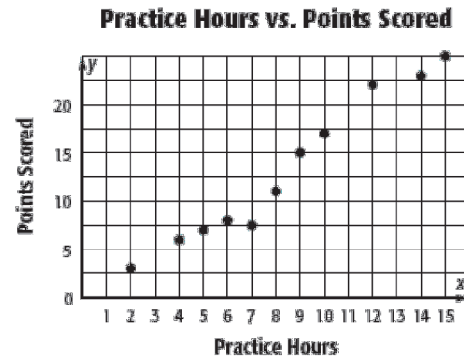
1.



Which equation best represents the line of best fit for this scatter plot?

- $y = 3x + 3$
- $y = x - 1$
- $y = x + 3$
- $y = 3x - 1$

2. Mary recorded the number of points she scored in her weekly basketball games compared with the number of hours she spent practicing her shooting the week before the game.



- Mary will never practice more than 15 hours.
- Mary will never score more than 30 points.
- Scoring more points will cause Mary to practice more.
- The more Mary practices, the more points she tends to score.

3. The stem-and-leaf graph shows the daily high temperatures for Piedmont, Oklahoma for the first half of April 2009.

Stem	Leaf
5	0 2 5 6 8
6	1 9 9
7	0 2 2 4 9 9
8	7

Key

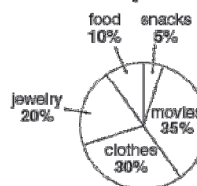
$$\boxed{7|2 = 72}$$

Which of these is not an advantage of presenting the data in a stem-and-leaf graph?

- The spread of the data is apparent.
- It is easy to find the mode of the data.
- It is easy to determine which day had the greatest temperature.
- The temperatures are organized from least to greatest.

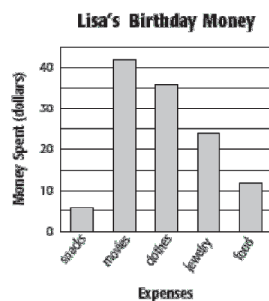
4. Lisa made a circle graph showing how she spent last year's birthday gift of \$120.00.

Lisa's Birthday Money

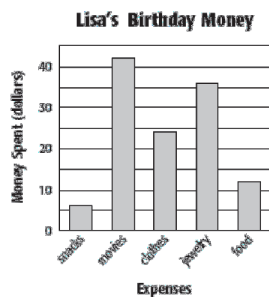


Which graph best reflects the information in the circle graph?

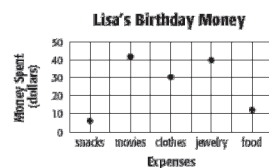
a.



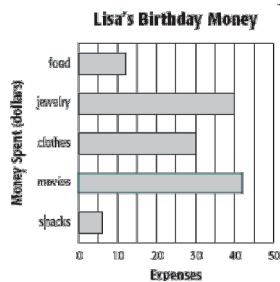
b.



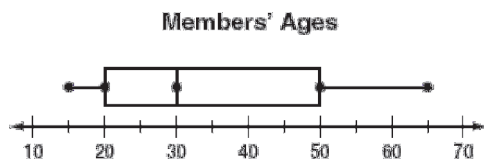
c.



d.

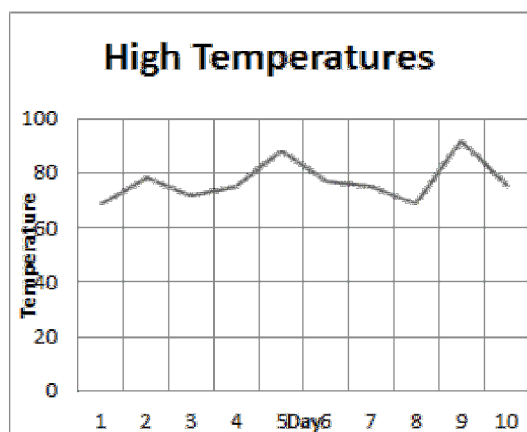


5. The box-and-whisker plot below summarized the ages of the members of a tennis club.



What information is conveyed on this box-and-whisker plot that is not conveyed by a bar graph of the same data?

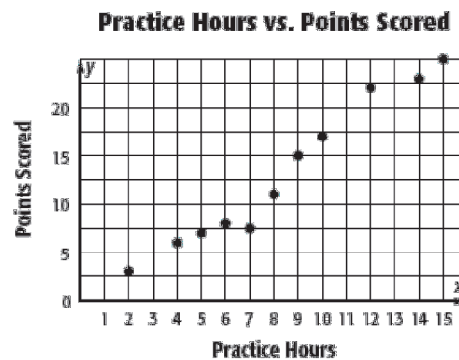
- the mean age of the members
 - the median age of the members
 - the most common age of the members
 - the number of members of the tennis club
6. Brian recorded the maximum temperature each day for 10 days and made this graph to display the results.



Between which two days did the maximum temperature change the most?

- day 1 and day 2
- day 4 and day 5
- day 6 and day 7
- day 8 and day 9

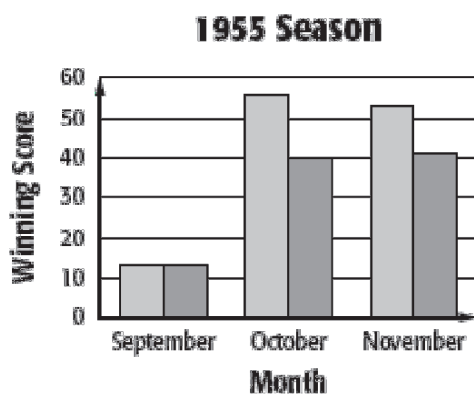
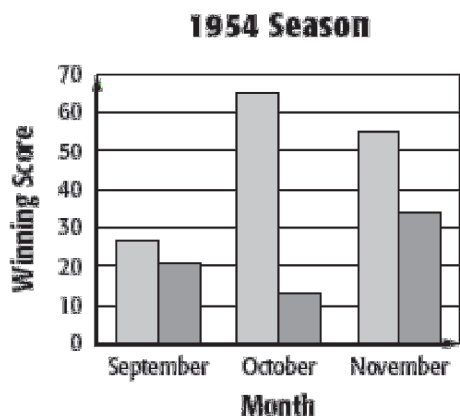
7. Mary recorded the number of points she scored in her weekly basketball games compared with the number of hours she spent practicing her shooting the week before the game.



Using the graph above, predict the best estimate of the number of points that Mary will score if she practices 11 hours.

- 5
- 10
- 15
- 20

8. The graphs below compare the highest and lowest winning scores for the Oklahoma Sooners Football team for three consecutive months in two consecutive years.



Which month in a particular year had the biggest difference in the winning scores?

- November; 1954
- October; 1955
- November; 1955
- October; 1954

9. June has test scores in Algebra I of 96, 92, and 86. What score does she need on her next test so that she has an average test score of 93?

- 98
- 93
- 92
- 86

10. A box contains 10 red pens and 10 black pens. Amy removes 2 red pens and 1 black pen from the box and does not replace them. She then reaches into the box and selects a pen at random. What is the probability that the pen is red?

- $\frac{8}{9}$
- $\frac{9}{17}$
- $\frac{1}{2}$
- $\frac{8}{17}$

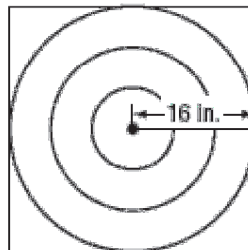
11. Of the first 50 adults to receive tickets at an Imax Theater, 15 receive blue tickets and 20 receive red tickets. Pedro buys an adult ticket. Based on this information, what is the probability that his ticket is neither blue nor red?

- $\frac{3}{10}$
- $\frac{4}{7}$
- $\frac{7}{10}$
- $\frac{3}{4}$

12. Seven students had a long jump competition. Each student jumped a different length. Joan was one of the students in the competition. What is the probability that Joan's jump was less than the median jump length?

- a. $\frac{1}{2}$
- b. $\frac{1}{3}$
- c. $\frac{3}{7}$
- d. $\frac{4}{7}$

13. Peter throws balls at a target. The target is a square board having a circle with a 16-inch radius drawn on it, as shown below. Peter hits the board every time, but his throws are totally random.



What is the probability to the nearest hundredth that his next throw will hit the board outside the circle? (Use 3.14 for π .)

$$A = \pi r^2$$

- a. 0.22
- b. 0.30
- c. 0.70
- d. 0.79

Short Answer

14. Find the values of the mean, median, and mode of the data.

11, 10, 9, 9, 9, 6, 15, 10, 15, 1, 2

15. Suppose that to make the golf team you need to score no more than 78 on average over 5 games. If you scored 75, 88, 70, and 67 in your first 4 games what is the highest score you can shoot in your 5th game and still make the team?

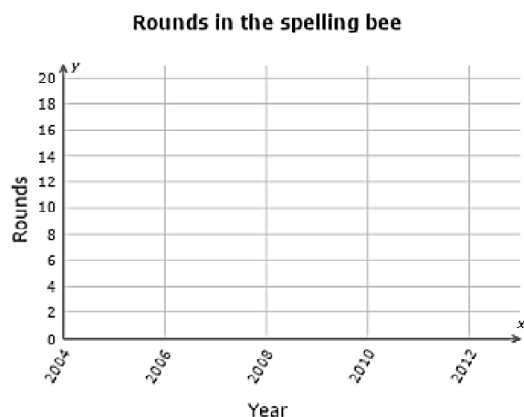
16. Find the values of the minimum, first quartile, median, third quartile, and maximum of the data.
11, 2, 16, 17, 18, 8, 7, 8

17. Make a box-and-whisker plot of the data:

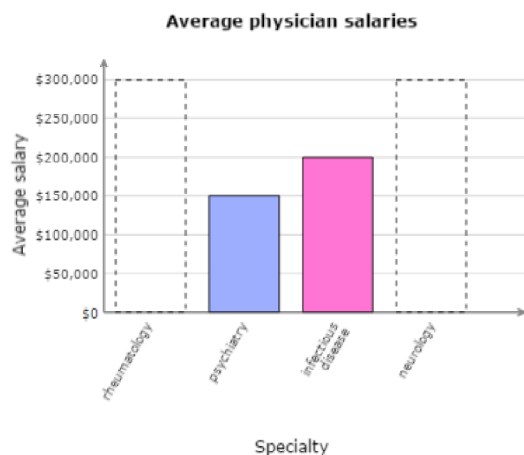
21, 27, 22, 22, 25, 14, 16, 10

18. Mrs. Meyer told students how many rounds to expect in the spelling bee based on previous years. Use the data in the table to complete the line graph below.

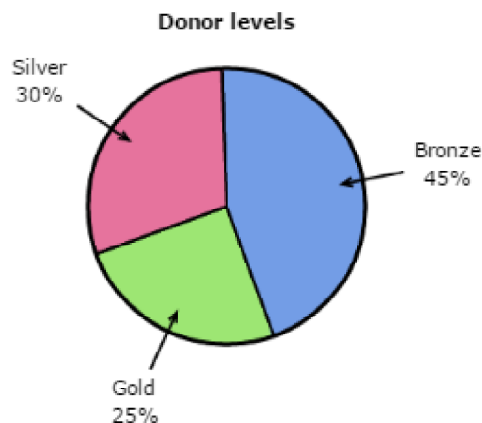
Rounds in the spelling bee	
Year	Rounds
2004	8
2006	6
2008	14
2010	6
2012	12



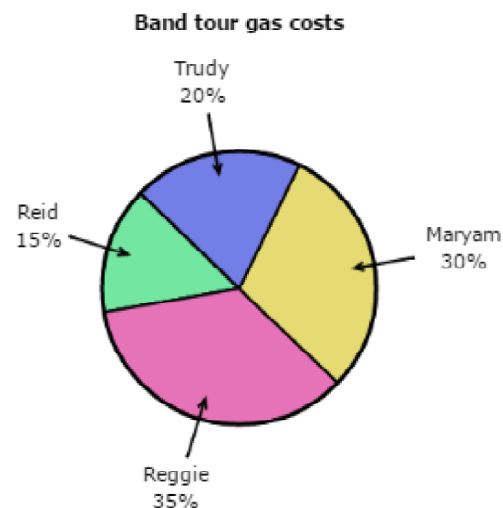
19. The average salary is \$250,000 in rheumatology, \$150,000 in psychiatry, \$200,000 in infectious disease, and \$250,000 in neurology. Use this data to complete the bar graph below.



20. The Booneville Symphony categorizes its donors as gold, silver, or bronze depending on the amount donated. If there are 40 donors, how many of them were in the gold category?



21. A band from Fairfax went on tour over the summer, and each member chipped in for the cost of gas. What is the measure of the central angle in the "Reid" section?



22. Kenny counted the number of pairs of shoes for sale at each of the shoe stores in the mall. How many stores had at least 62 pairs?

Pairs of shoes per store

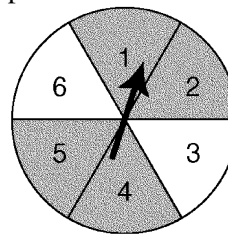
Stem	Leaf
4	2 2 8 9
5	0 0
6	0 0 2 2 4 7 8
7	0 1 2 4
8	
9	0 0

23. Principal Murphy reported the state test scores from some students at her school. How many students scored at least 13 points but fewer than 39 points?

Test scores

Stem	Leaf
0	8
1	8 8
2	4
3	0 6 9
4	5
5	1 5 7 8
6	0 2 2 3 4 8 8
7	1 1 4 8 8

24. What is the probability of the spinner landing on a white section? Write your answer as a simplified fraction and as a percent rounded to one decimal place.



25. Make a scatter plot of the data pairs (miles driven, fuel used). State whether the data appears to have a positive correlation, negative correlation, or no correlation. Draw a line of best fit and write the equation of the line.

Miles driven	180	300	240	280	290	45	135	170	55	160	115
Fuel used (gal)	6	13.5	11	8	8	1.5	5	5.8	3	5.2	4

