

Ohio Achievement Tests – 4th Grade Math

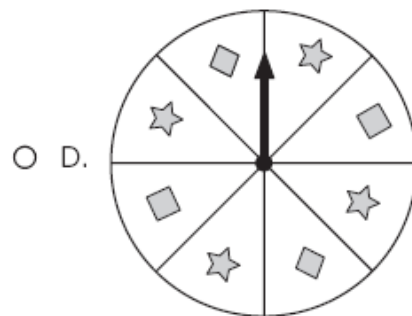
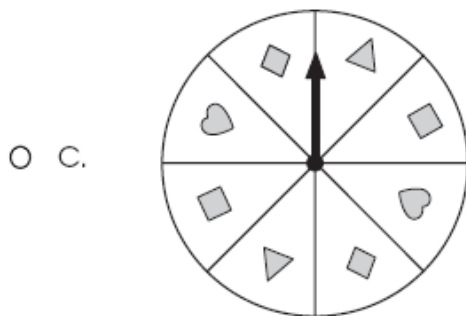
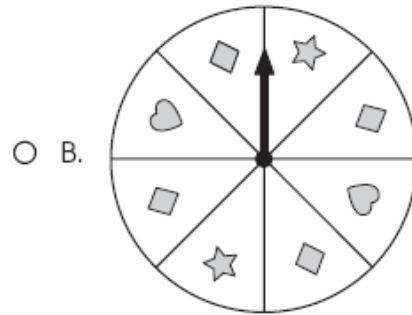
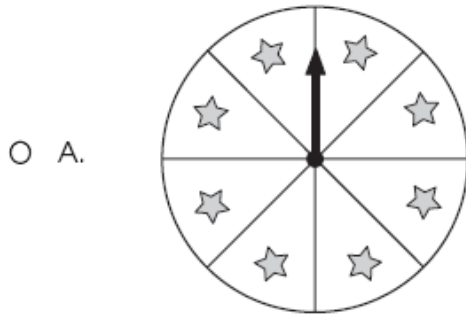
Data Analysis and Probability Standard

1. Alan will be gathering data about the temperature.

Which part of Alan's data collection plan should come first?

- ☐ A. create a graph to display the data
- ☐ B. record the data
- ☐ C. choose a place and time to collect the data each day
- ☐ D. interpret the data

2. Which spinner has a probability of 0 for landing on a star, ☆?



3. Reuben recorded the heights of 7 boys and 7 girls in his class in the table shown.

Height (in inches)	
Boys	Girls
47	49
50	50
51	52
53	55
53	56
55	56
58	58

Calculate the range, the median and the mode for the height of the boys and for the height of the girls.

Range:

Boys _____

Girls _____

Median:

Boys _____

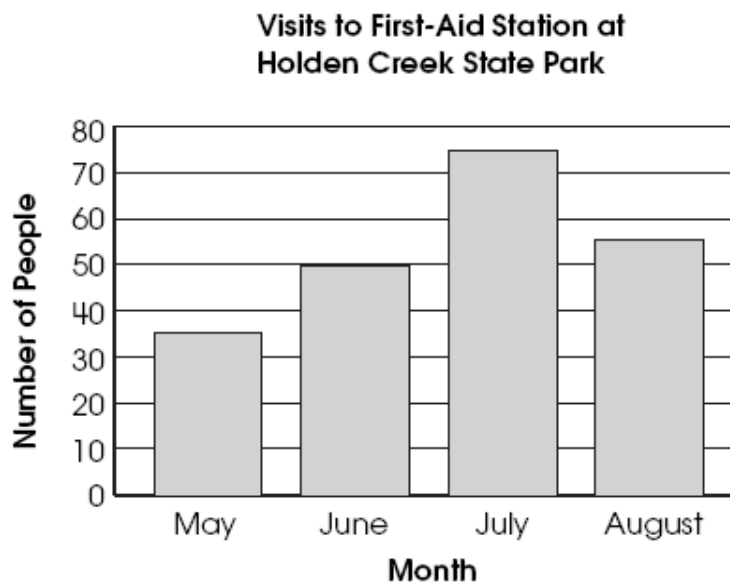
Girls _____

Mode:

Boys _____

Girls _____

4. The bar graph shows the number of people who visited the first-aid station at Holden Creek State Park each month last summer.



How many more people visited the first-aid station in July than in May?

- ☐ A. 15 people
- ☐ B. 20 people
- ☐ C. 40 people
- ☐ D. 110 people

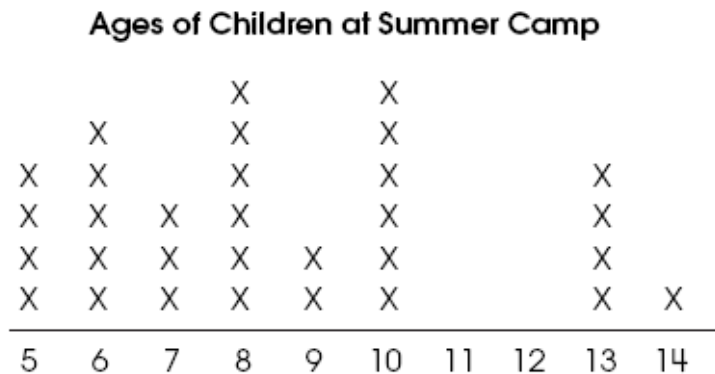
5. The table shows the number of different-colored tiles Anita placed in a bag.

Tiles in Bag	
Color	Number of Tiles in Bag
Red	6
Blue	11
Yellow	15
Green	5

Anita picked one tile from the bag without looking.

Which shows the colors listed in order from the least likely to be picked to the most likely?

- ☐ A. green, red, yellow, blue
- ☐ B. green, red, blue, yellow
- ☐ C. yellow, blue, green, red
- ☐ D. red, blue, yellow, green
6. Andrea made a line plot of the ages of children at summer camp.



Which is true about the data in the line plot?

- ☐ A. The data are spread out evenly.
- ☐ B. The data have a hole between 10 and 13.
- ☐ C. There is a clump of data between 10 and 13.
- ☐ D. The range and the median are the same.

7. Calvin plans to plant one type of flower and one type of vegetable in his garden. He chooses the plants from the table shown.

Plants	
Flowers	Vegetables
Roses	Carrots
Tulips	Peas

Which list shows all the different combinations of one flower and one vegetable that Calvin can plant?

- ☐ A. roses and carrots, roses and peas
- ☐ B. roses and carrots, roses and peas, tulips and carrots, tulips and peas
- ☐ C. roses and carrots, tulips and peas, roses and tulips, carrots and peas
- ☐ D. roses and carrots, roses and peas, roses and tulips, tulips and carrots, tulips and peas, carrots and peas
8. Ramón's uncle is buying an automobile. He needs to choose an outside color and an inside color.

Color Choices	
Outside Color	Inside Color
Blue	Gray
Red	Tan

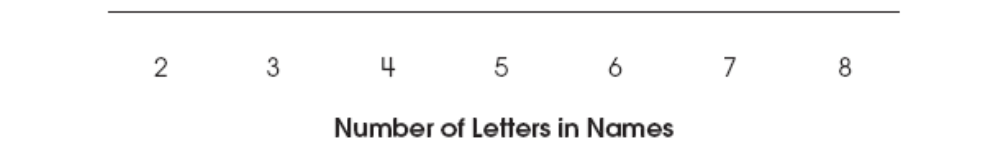
What are all the possible combinations of one outside color and one inside color that he could choose?

- ☐ A. blue and gray, blue and tan, red and gray, red and tan
- ☐ B. blue and red, blue and gray, blue and tan, blue and blue
- ☐ C. gray and tan, red and blue
- ☐ D. gray and red, gray and blue

9. Twelve students wrote their names and the number of letters in their names on cards as shown.

Grant 5	Ali 3	Courtney 8	Kim 3	Owen 4	Heidi 5
Katie 5	Mark 4	Linda 5	June 4	Abdul 5	Connie 6

Use the line to construct a line plot of the information on the students' cards. Use **X** to show the data.



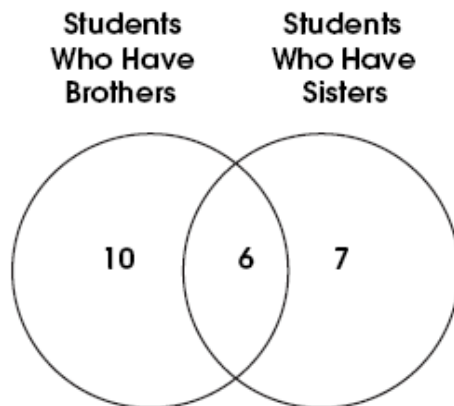
Find the median, mode and range of the data on the cards.

Median: _____

Mode: _____

Range: _____

10. The Venn diagram shows the number of students in a class who have brothers and sisters.



Which statement is true?

- ☐ A. Exactly 6 students in the class have brothers.
 - ☐ B. Exactly 10 students in the class have brothers.
 - ☐ C. Exactly 16 students in the class have brothers.
 - ☐ D. Exactly 23 students in the class have brothers.
11. Fred recorded the heights, in inches, of the students in his class. The range of the data was 15.

Which statement is true about Fred's data?

- ☐ A. Fred found that 15 students are all the same height.
- ☐ B. The height of the shortest student is 15 inches.
- ☐ C. Fred recorded the heights of 15 students in his class.
- ☐ D. The tallest student is 15 inches taller than the shortest student.

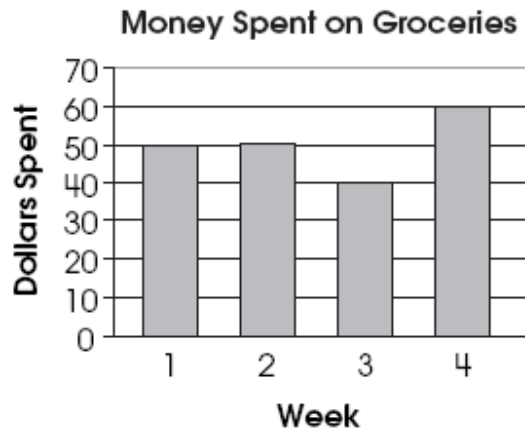
12. Raymond has these notebooks and pens in his backpack.

Raymond's Backpack

Notebook	Pens
Science	blue
Reading	green
Writing	red

List all the possible combinations of one notebook and one pen that Raymond could take from his backpack.

13. Ken goes grocery shopping once a week and keeps track of how much money he spends. He made a bar graph and a line plot to display these data.



What information can be found only on the bar graph?

- ☐ A. the number of weeks he shopped
- ☐ B. the week he spent the least money
- ☐ C. the most money he spent in one week
- ☐ D. the least money he spent in one week

14. Mrs. Allen has 15 students. Eight students belong to the drama club and 10 students belong to the computer club. Some students belong to both clubs.

Which Venn diagram represents these data?

