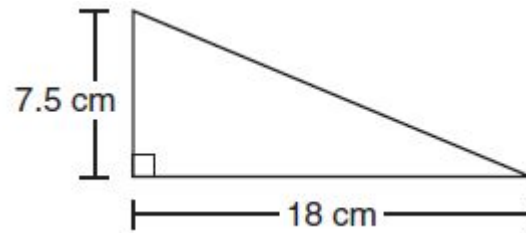


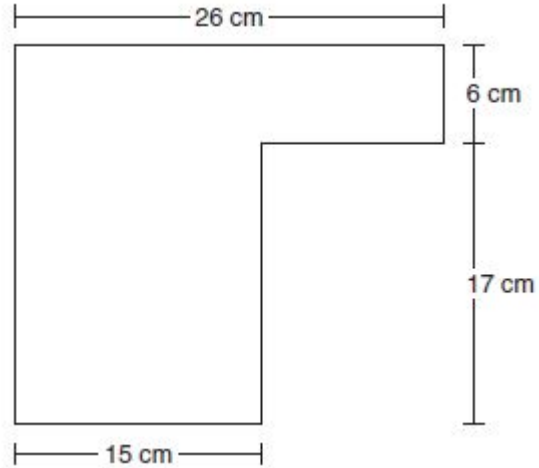
Student Name:**Grade: 06****Test Name:** POLK Pretest 6.SP & 6.G

1. A right triangle is shown.



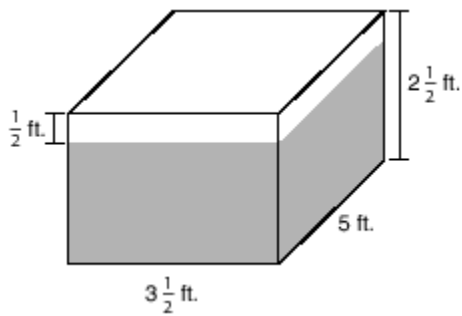
What is the area, in square centimeters, of the triangle? Show your work or explain how you know.

2. Look at this figure. All angles are right angles.



What is the area, in square centimeters, of the figure? Show your work or explain how you know.

3. The diagram below shows the dimensions of a container of sand that is shaped like a rectangular prism. The container is filled up to $\frac{1}{2}$ foot from its top.

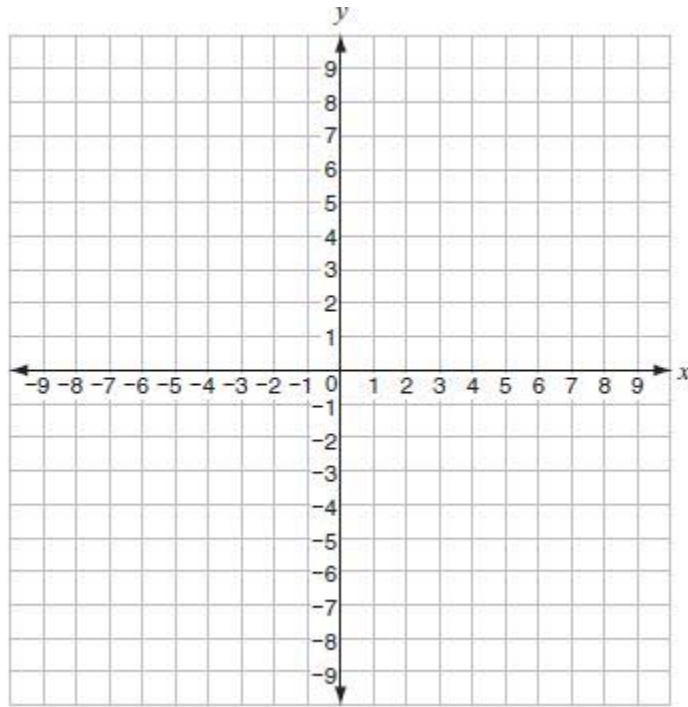


What is the volume of the sand in the container?

- (a) 30 cubic feet
 - (b) 35 cubic feet
 - (c) $43\frac{1}{2}$ cubic feet
 - (d) $43\frac{3}{4}$ cubic feet
4. Ms. Corey rents a storage unit. The storage unit has a length of 12 feet 6 inches, a width of 16 feet, and a height of 8 feet 4 inches.

What is the volume, in cubic feet, of the storage unit? Show or explain how you found your answer.

5. You may use this coordinate plane to answer the question.

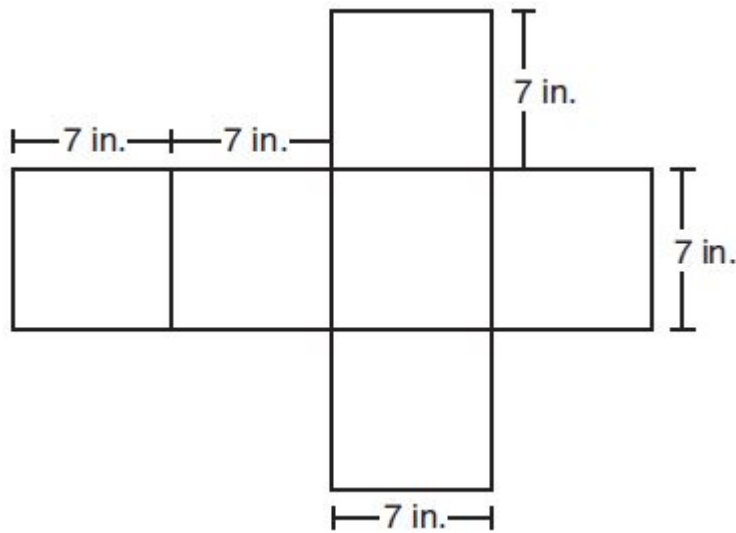


Karl used the coordinate plane to plot a rectangle for his garden. He plotted points at $(2, 8)$, $(-3, 8)$, $(2, -5)$, and $(-3, 5)$.

- What are the dimensions of the garden, in units? Show your work or explain how you know.
- What is the perimeter, in units, of the garden? Show your work or explain how you know.

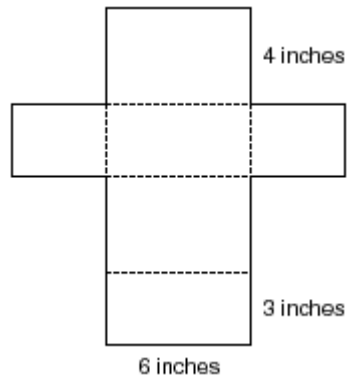
6. A rectangle is drawn on a coordinate plane. Each of the longer sides of the rectangle is 4 units long. The two endpoints of one of the shorter sides of the rectangle are at (9, 5) and (6, 5). Write the coordinates of two points that could be the other two vertices.

7. The diagram shows the dimensions of a piece of cardboard that can be folded to make a box.



What is the surface area, in square inches, of the box? Show or explain how you found your answer.

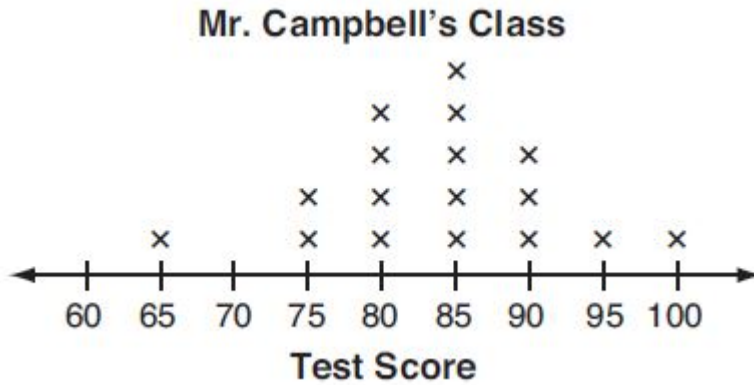
8. The net of a rectangular prism is shown below.



- What is the surface area, in square inches, of the rectangular prism? Show your work or explain how you know.
- What is the volume, in cubic inches, of the rectangular prism? Show your work or explain how you know.
- In the space below, draw a net of a rectangular prism that has the same volume as, but a different surface area than, the prism whose net is shown above. Explain how you know that the volume is the same and the surface area is different.

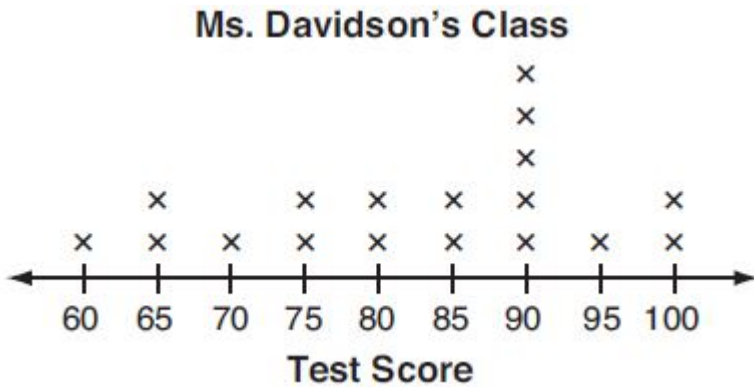
9. Loretta wanted to ask a statistical question about the height of students in her school. She asked a random sample of students, “What is your height, in meters?”
- Explain why Loretta’s question is a statistical question.
 - Give an example of a question Loretta could ask that is **not** a statistical question.

Test scores from Mr. Campbell's class are shown in the line plot.
10.



a. What was lowest test score in Mr. Campbell's class?

Test scores from Ms. Davidson's class are shown in the line plot.



b. What was the median test score in Ms. Davidson's class?

c. Which class has the greater interquartile range of test scores? Show or explain how you found your answer.

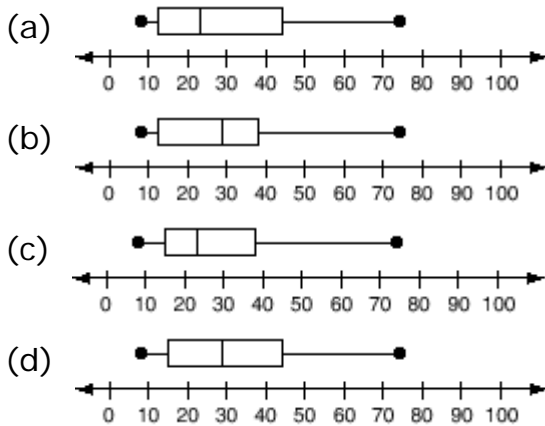
11. A business made some purchases. The mean price of the purchases was \$150, and the range was \$30.

Based on this information, which statement must be true?

- (a) One purchase was exactly \$150.
 - (b) One purchase was exactly \$180.
 - (c) Two purchases were \$30 apart in price.
 - (d) Two purchases were \$150 apart in price.
12. A fisherman caught 10 fish in one month. Their weights, in pounds, are shown below.

8 12 16 17 22 24 29 38 45 74

Which box plot best summarizes the data?



13. Connor recorded the temperature in degrees Fahrenheit each day at noon. Here are his data.

51, 53, 55, 55, 58, 60, 61, 64, 64, 64, 66, 67, 67, 68, 69, 69, 69, 69, 70, 70

On how many days was the temperature greater than the mean temperature?

- (a) 2
- (b) 6
- (c) 10
- (d) 13

- Five people each traveled over 100 miles to attend a reunion. The number of miles each person traveled is shown.
- 14.

116, 114, 114, 109, 122

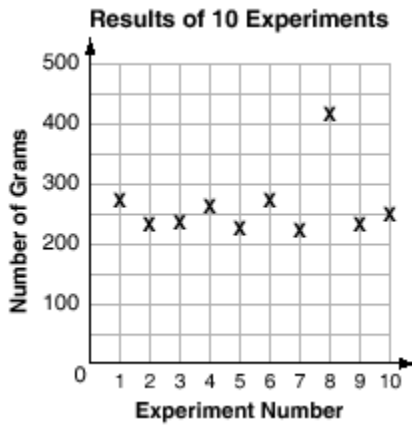
What is the mean distance, in miles, that was traveled by the five people? Show or explain how you got your answer.

- Ginny is performing in a gymnastics competition. The list below shows the scores from 6 judges for her performance.
- 15.

8.2, 8.0, 7.6, 7.8, 7.8, 8.6

What is the mean of Ginny's scores?

16. A chemist performed an experiment 10 times. The graph below shows the results.



Which measure best represents the data?

- (a) the mean, because there is an outlier for the data
- (b) the median, because there is an outlier for the data
- (c) the mean, because there are no outliers for the data
- (d) the median, because there are no outliers for the data