

Grade 6
Released Items

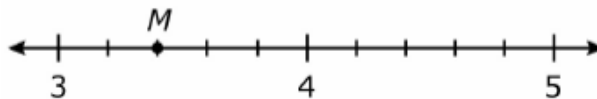
6N2

Number Operations and Concepts - Understand ways to represent numbers, relationships among numbers, and number systems

Raul made a model race car. Each wheel on the car has a diameter of 1.204 inches. What is 1.204 written in words?

- A One and two hundred four thousandths
- B One and two hundred four thousands
- C One and two thousand four hundreds
- D One and two thousand four hundredths

Point M is shown on the number line below.



Which best describes the location of point M ?

- A $\frac{16}{5}$
- B $\frac{17}{5}$
- C $\frac{13}{4}$
- D $\frac{10}{3}$

6N3

Number Operations and Concepts - Develop the connection between conceptual understanding and computational proficiency

Bernard finished a race 0.008 of a second faster than Michael.

Part A. It took Michael 35.145 seconds to finish the same race. What amount of time in seconds did it take Bernard to finish the race? Write your answer in the space below. Show or explain how you got your answer.

Time in Seconds: _____

Part B. The winner of the race finished in 34.032 seconds. What number of seconds ahead of Bernard did the winner finish the race? Write your answer in the space below. Show or explain how you got your answer.

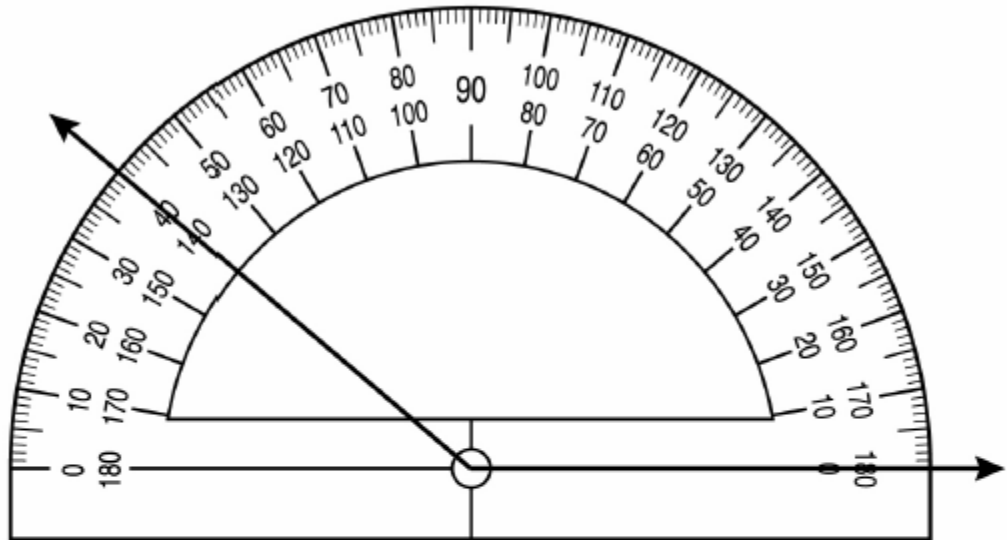
Number of Seconds: _____

6G1

Geometry - Specify locations and describe spatial relationships using coordinate geometry and other representational systems

Using a protractor, Hector drew an angle measuring 140° .

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What type of angle did Hector draw?

- A . Acute
- B . Obtuse
- C . Right
- D . Straight

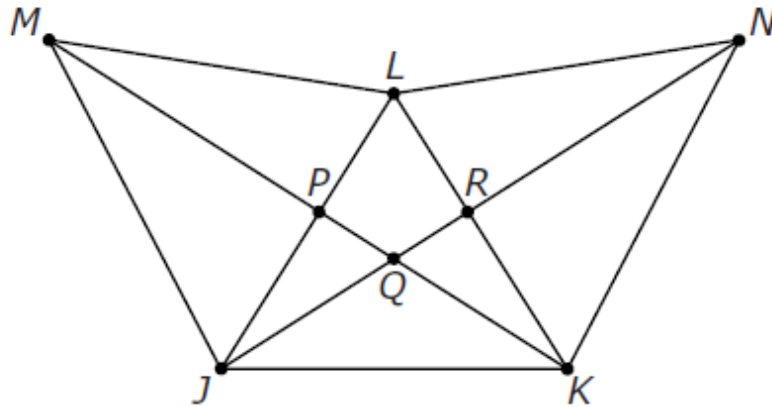
6G2

Geometry - Analyze characteristics and properties of two- and three-dimensional geometric shapes

6G3

Geometry - Apply transformations and use symmetry to analyze mathematical situations

Use the figure shown below to answer Parts A and B.



Part A. Use letters from the figure to identify two polygons that appear to be congruent. Write your answers in the spaces below.

Two Congruent Polygons: _____, _____

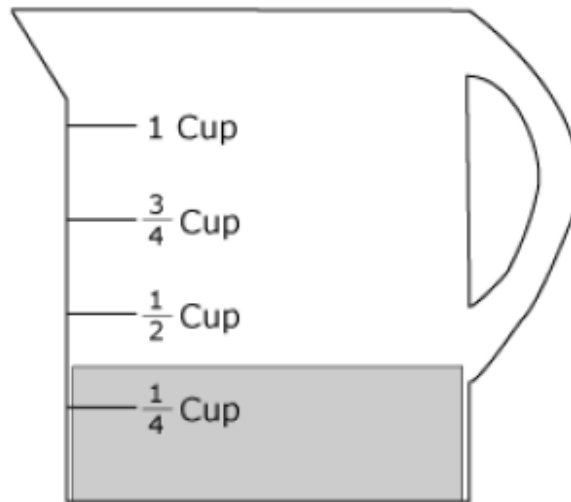
Part B. What is the geometric name for the two polygons you identified in Part A? Write your answer in the space below.

Geometric Name: _____

6M1

Measurement - Understand measurable attributes of objects and the units, systems, and processes of measurement

Frank poured some milk into a measuring cup, as pictured below.



Which is closest to the amount of milk in the cup?

A $\frac{1}{8}$ cup

C $\frac{3}{8}$ cup

B $\frac{1}{6}$ cup

D $\frac{3}{16}$ cup

6M2

Measurement - Apply appropriate techniques, tools, and formulas to determine perimeter, area or volume

A parallelogram has a base that is 6 inches in length, a side that is 5 inches in length, and a height of 4 inches. What is the area in square inches of the parallelogram?

5

- A . 20 sq in.
- B . 22 sq in.
- C . 24 sq in.
- D . 30 sq in.

6A1

Algebra - Understand patterns, relations, and functions

At his grocery store, Mr. Sims stacked rows of macaroni boxes on top of each other to make a display.

- The bottom row of the display has 12 boxes.
- Each row above the bottom row has 1 less macaroni box than the row below it.

What is the total number of macaroni boxes in the bottom four rows of the display?

- A 30
- B 36
- C 42
- D 48

- Derrick started the number pattern shown below.

2, 4, 8, 16, 32, . . .

- Part A. What are the next 3 terms in the pattern? In the Answer Book, show or explain how you got your answer.
- Part B. In the Answer Book, describe the pattern, or write a rule that Derrick could have used to create the pattern.
- Part C. In the Answer Book, create another number pattern using the same rule Derrick used (Part B) but begin with a different number. Your pattern must contain 5 terms.

6A2

Algebra - Use mathematical models to represent and understand quantitative relationships

Julio had 156 baseball cards. He gave 8 to his friend Matt. Which equation represents c , the total number of cards Julio should have left?

83

A . $c = 156 - 8$

B . $c = 156 + 8$

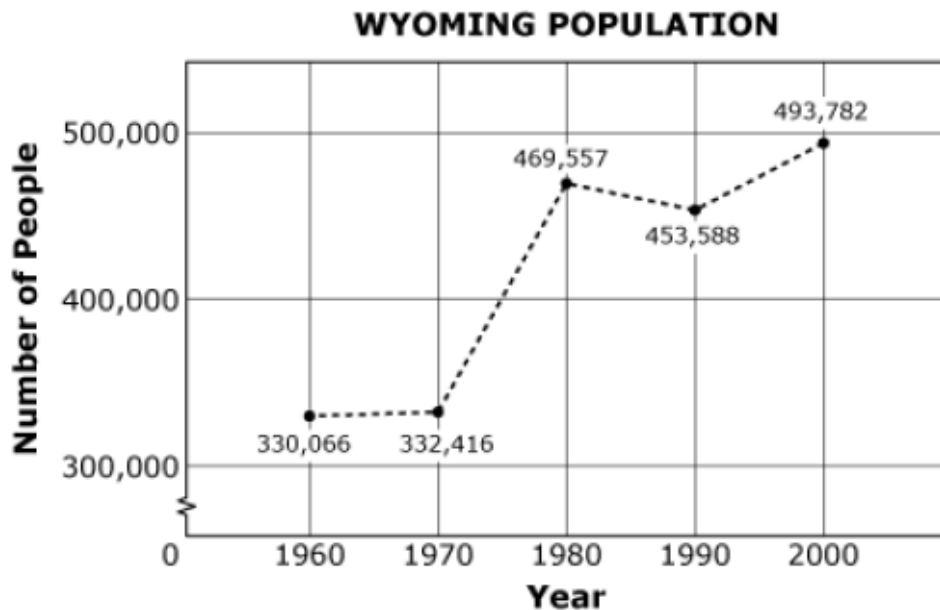
C . $c = 156 \times 8$

D . $c = 156 \div 8$

6D1

Data Analysis and Probability - Collect, organize, and display relevant data to answer questions and use appropriate statistical methods to analyze the data

Changes in the population of Wyoming from the year 1960 to the year 2000 are displayed in the graph below.



According to the data in the graph, which period of time had the greatest increase in population?

- A From 1960 to 1970
- B From 1970 to 1980
- C From 1980 to 1990
- D From 1990 to 2000

6D2

Data Analysis and Probability - Develop and evaluate inferences and predictions that are based on data

Lawrence is conducting a probability experiment using a bag of marbles of equal size.

- 5 marbles are red
- 3 marbles are blue
- 4 marbles are yellow

During the experiment, Lawrence will select one marble without looking, record the color of the marble, and then put the marble back in the bag.

Part A. What is the probability that Lawrence will select a blue marble on the first try? Write your answer in the space below, show or explain how you got your answer.

Part B. If Lawrence repeats this experiment 20 times, about how many times can he expect to select a blue marble? Write your answer in the space below, show or explain how you got your answer.
