An expression is shown below.

$$5 \times 1\frac{1}{12}$$

Which has the same value as the expression?

A. $5 + \left(1 + \frac{1}{12}\right)$

B. $(1 + 1 + 1 + 1 + 1) + \left(\frac{1}{12}\right)$

C. $1 + \left(\frac{1}{12} + \frac{1}{12} + \frac{1}{12} + \frac{1}{12} + \frac{1}{12}\right)$

D. $(1 + 1 + 1 + 1 + 1) + \left(\frac{1}{12} + \frac{1}{12} + \frac{1}{12} + \frac{1}{12} + \frac{1}{12}\right)$

Dai cooks 54 cups of soup at his restaurant. He serves an equal share of all 54 cups of soup to each of 24 customers. How many cups of soup is each customer served?

A. $\frac{3}{10}$

B. $\frac{4}{9}$

C. $1\frac{1}{4}$

D. $2\frac{1}{4}$

A gardening shop receives a shipment of 12 crates of plants. Each crate contains 18 plants. A worker displays all the plants on 24 shelves with the same number of plants on each shelf. How many plants are displayed on each shelf?

A. 6
B. 9
C. 16
D. 36

A space heater warms the temperature of a room by $\frac{2}{3}$ of a degree Fahrenheit each minute. By how many degrees Fahrenheit will the space heater warm the room in $6\frac{1}{2}$ minutes?

A. $4\frac{1}{3}$

B. $5\frac{5}{6}$

C. $7\frac{1}{6}$

D. $9\frac{3}{4}$

The chart below shows the number of rocking chairs a factory made in the first three months of a year and the number of rocking chairs that the factory shipped for each of those months.

Rocking Chair Factory

Month	Number of Rocking Chairs Made	Number of Rocking Chairs Shipped
January	4,228	2,987
February	3,165	4,000
March	3,784	3,985

How many rocking chairs that were made in the first three months of the year remain to be shipped?

A. 201
B. 205
C. 1,241
D. 2,277

Multiply: 640 × 390

A. 249,600
B. 293,600
C. 540,000
D. 768,000

An after-school program has 24 sports video games students can play after they finish their homework. There are three types of sports games.

football: $\frac{1}{6}$ of $\frac{1}{2}$ of the video games

basketball: $\frac{1}{4}$ of $\frac{2}{3}$ of the video games

soccer: the remaining video games

How many video games are soccer games?

A. 2

B. 4

C. 18

D. 20

Sophie had 60 flashlights for sale at her store. She sold $\frac{4}{5}$ of the flashlights. Which statement about the number of flashlights sold must be true?

A. Sophie sold 48 flashlights because $60 \times \frac{4}{5} = 48$.

B. Sophie sold 75 flashlights because $60 \div \frac{4}{5} = 75$.

C. Sophie sold 52 flashlights because $\frac{4}{5} = 0.8$ and $60 - 8 = 52$.

D. Sophie sold 40 flashlights because both the numerator and the denominator of $\frac{4}{5}$ are factors of both 40 and 60.

Students are weighing two types of rubber balls during science class.

- Each yellow rubber ball weighs 1.28 pounds.

- Each red rubber ball weighs 0.96 pound.

What is the total weight of 25 yellow rubber balls and 50 red rubber balls?

A. 56 pounds
B. 80 pounds
C. 88 pounds
D. 168 pounds

Jake measured the amount of salt in two liters of seawater. His results are listed below.

first liter: 33.165 grams

second liter: 35.787 grams

He rounds both values to the nearest hundredth and adds them. What is the sum of the rounded amounts of salt Jake found in the seawater?

A. 68.95 grams
B. 68.952 grams
C. 68.957 grams
D. 68.96 grams

Subtract: $7\frac{1}{2} - \frac{2}{3}$

A. $2\frac{1}{6}$

B. $3\frac{5}{6}$

C. $6\frac{5}{6}$

D. $7\frac{1}{6}$

The table below shows four mineral samples and the mass of each sample.

Mineral Masses

Mineral	Mass (grams)
albite	3.012
graphite	3.07
magnetite	3.061
quartz	3.05

Which number sentence correctly compares the masses, in grams, of two of the mineral samples?

A. $3.05 < 3.061$

B. $3.05 < 3.012$

C. $3.012 > 3.07$

D. $3.012 > 3.061$

Darren is told that the weight of an old coin is 37.2 grams. However, when he weighs the coin he finds that the digit in the hundredths place has a value that is $\frac{1}{10}$ of the value of the digit in the tenths place. Which expression, in expanded form, shows the weight, in grams, Darren finds?

A. $30 + 2 + 0.2$

B. $30 + 7 + 0.2 + 0.01$

C. $30 + 7 + 0.2 + 0.02$

D. $30 + 7 + 0.2 + 0.10$

Jon rides his bike 0.23 mile. Angie rides her bike 100 times as far as Jon rides. How many miles does Angie ride her bike?

A. 2.3

B. 23

C. 230

D. 2,300

Jerry has 56.92 centimeters (cm) of wire. He uses 2 pieces of the wire. Each piece he uses is 7.37 cm long. What is the length of the remaining wire, rounded to the nearest tenth of a centimeter?

A. 7.7 cm

B. 42.2 cm

C. 49.6 cm

D. 71.7 cm

Juan is estimating the quotient of 9,648.18 ÷ 15.85. He first rounds both 9,648.18 and 15.85 to the nearest whole number. What should be Juan's estimated quotient?

A. 63

B. 603

C. 630

D. 6,030

What is 27.462 rounded to the nearest tenth?

A. 20

B. 27.4

C. 27.5

D. 30

A decimal number is multiplied by 10^6. Which statement describes the change in position of the decimal point in the decimal number as a result of the multiplication?

A. The decimal point moves 5 places to the left.

B. The decimal point moves 6 places to the left.

C. The decimal point moves 6 places to the right.

D. The decimal point moves 10 places to the right.

A scientist listed the volumes, in milliliters, of some liquids used in an experiment.

1.25 1.079 1.204 1.18

Which inequality correctly compares the volumes, in milliliters, of two of these liquids?

A. 1.25 < 1.204

B. 1.079 < 1.25

C. 1.18 > 1.204

D. 1.079 > 1.18

A number written in expanded form is shown below.

(8 × 1,000) + (3 × 100) + (2 × 1) + (4 × 1/10) + (7 × 1/1,000)

What is the number written in standard form?

A. 832.47

B. 8,302.407

C. 8,302.47

D. 8,320.407

Which expression is equivalent to 6/7 × 3/4 ?

A. 6 × 3 / 7 × 4

B. 6 × 4 / 7 × 3

C. 6/7 / (1/4) × 3/4 (1/7)

D. 6/7 (4) × 3/4 (7)

Subtract: 124.8 – 9.34

A. 115.46

B. 115.54

C. 125.54

D. 125.56

Paul brings 4 quarts of potato salad to a picnic. Each serving of potato salad is 1/8 quart. How many total servings of potato salad does Paul bring to the picnic?

A. 2

B. 4

C. 12

D. 32

Kaitlin walked the length of a path in a park 3 times. The total distance she walked was less than 1 mile. What must be true about the length of the path in the park?

A. The length of the path must be shorter than 1/3 mile.

B. The length of the path must be between 1/3 and 1 mile.

C. The length of the path must be between 1 and 3 miles.

D. The length of the path must be longer than 3 miles.

Stephen has 1/2 gallon of a chemical. He wants to put an equal amount of the chemical into each of 4 containers, using all of the chemical. Stephen wants to find the fraction of a gallon that will be in each container. Which equation correctly represents Stephen's problem?

A. $4 \times 2 = 8$

B. $4 \div 1/2 = 2$

C. $1/2 \div 4 = 1/8$

D. $1/2 \times 4 = 2$

A metal container is shaped like a rectangular prism. The dimensions of the container are shown below.

14 cm

22 cm

8 cm
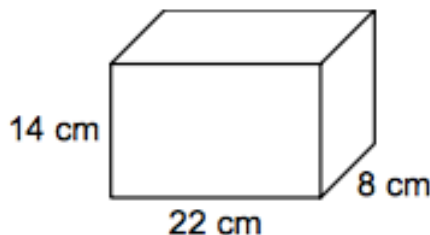
The container is completely filled with a liquid mixture. There is an equal amount of each of the 3 liquids in the mixture. What is the volume of each liquid in the container?

A. $14\frac{2}{3}$ cm³

B. $91\frac{7}{27}$ cm³
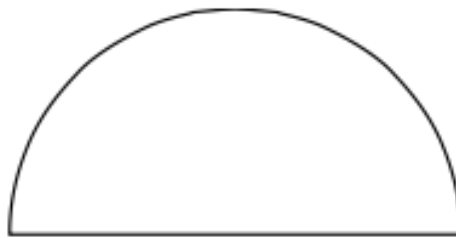
C. $273\frac{7}{9}$ cm³

D. $821\frac{1}{3}$ cm³

Sonja rakes leaves for $3\frac{1}{4}$ **hours**. For how many **minutes** does Sonja rake leaves?

A. $63\frac{1}{4}$ minutes

B. $180\frac{1}{4}$ minutes

C. 195 minutes

D. 225 minutes

Jabari has a quilt made from pieces of fabric that are all parallelograms. Which shape would **not** be found on Jabari's quilt?

A.

B.

C.

D.

A shape is shown below.

Which statement about the shape is true?

A.   The shape is a polygon because it is closed.

B.   The shape is a polygon because it has one straight side.

C.   The shape is **not** a polygon, because it is closed.

D.   The shape is **not** a polygon, because it has one curved side.

A scientist puts stakes into the ground at the locations of the plotted points shown on the coordinate grid below.
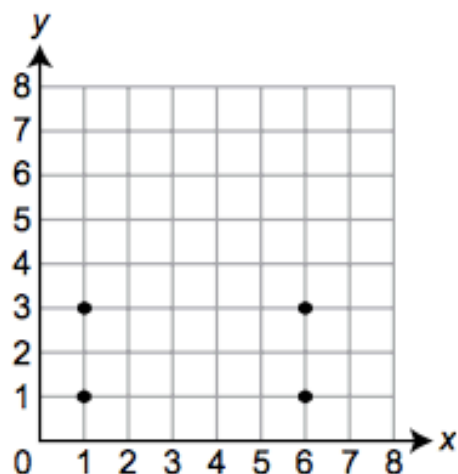
The scientist connects the stakes with string to form a rectangle before digging for objects in the ground. The scientist finds one object inside the rectangle and one object outside the rectangle. At which two locations could the objects have been found?

A. (2, 2) and (5, 2)

B. (4, 2) and the origin

C. (3, 0) and the point with an x-coordinate of 1 and a y-coordinate of 5

D. (3, 2) and the point with a y-coordinate of 2 and an x-coordinate of 5

The first six terms in pattern A and pattern B are shown below.

pattern A: 0, 2, 4, 6, 8, 10
pattern B: 0, 10, 20, 30, 40, 50

The patterns continue. Which statement about corresponding terms in the patterns is true?

A. Each term in pattern A is $\frac{1}{5}$ of the corresponding term in pattern B.

B. Each term in pattern A is $\frac{1}{2}$ of the corresponding term in pattern B.

C. Each term in pattern A is always less than the corresponding term in pattern B.

D. Each term in pattern A is equal to or 8 less than the corresponding term in pattern B.

Each of the students in Ms. Steven's class orders a fruit shake. The bar graph below shows the number of fruit shakes of each flavor the students order.
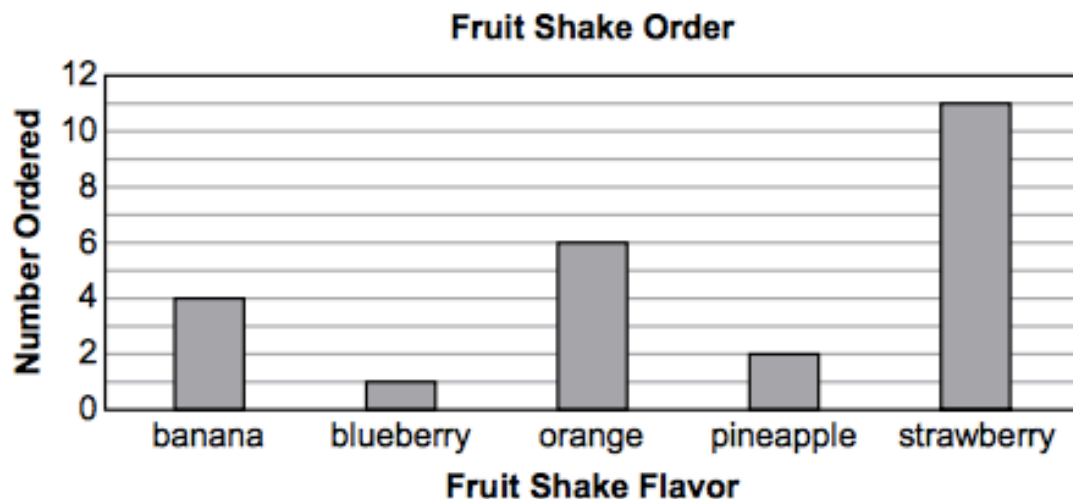
Fruit Shake Order

Which two fruit shake flavors are ordered by exactly half of the students in Ms. Steven's class?

A. banana and orange

B. banana and pineapple

C. blueberry and strawberry

D. orange and strawberry

During his free time last week, Javon read a book and played outside. At the end of each day, Javon recorded the total number of hours he had spent so far that week doing each activity. The data Javon recorded for the last four days of the week are shown in the table below.

Javon's Free Time

End of Day	Read a Book (hours)	Played Outside (hours)
Wednesday	8	12
Thursday	10	15
Friday	12	18
Saturday	14	21

Based on the patterns in the table, which statement is true?

A. For every hour Javon read a book, he played outside for 1.5 hours.

B. For every hour Javon played outside, he read a book for 1.5 hours.

C. For every hour Javon read a book, he played outside for 3 hours.

D. For every hour Javon played outside, he read a book for 3 hours.

The line plot below shows the weights, in pounds, of peanuts purchased by 7 customers at a grocery store.

Peanuts Purchased
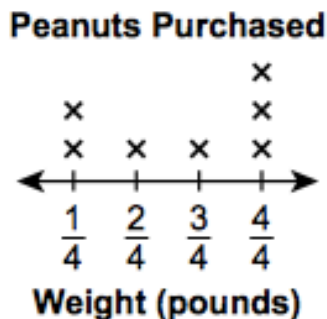
Weight (pounds)

What is the combined weight, in pounds, of the peanuts purchased by the 7 customers?

A. $\frac{5}{8}$

B. $1\frac{3}{4}$

C. $2\frac{1}{2}$

D. $4\frac{3}{4}$

What is the value of the expression $[(5 + 3) \times 6] \div 2$?

A. 11.5
B. 13
C. 14
D. 24

A rock weighs $6\frac{1}{2}$ tons. How many **pounds** does the rock weigh?

A. 12,000 pounds
B. 13,000 pounds
C. 192,000 pounds
D. 208,000 pounds

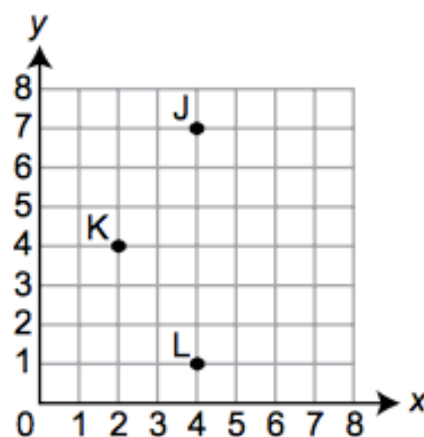The first four terms in a pattern are shown below.

$$\frac{3}{4}, \quad 1\frac{1}{4}, \quad 1\frac{3}{4}, \quad 2\frac{1}{4}$$

The pattern continues. What is the tenth term in the pattern?

A. $5\frac{1}{4}$

B. $5\frac{3}{4}$

C. $10\frac{1}{4}$

D. $10\frac{3}{4}$

Points J, K, and L are shown on the coordinate grid below.

Point M will be plotted at (6, 4). The four points form the vertices of a shape. Which statement describes the shape that is formed?

A.   The shape is a rhombus, but not a square.

B.   The shape is a square, but not a rectangle.

C.   The shape is a parallelogram, but not a rhombus.

D.   The shape is a parallelogram, but not a quadrilateral.

Adam and Brianna each made a number pattern.

Adam's pattern starts with the number 3 and follows the rule "add 6."

A. What are the first four terms of Adam's pattern?

Brianna's pattern starts with the number 3 and follows the rule "add 5."

B. What is the first number greater than 3 that will be in both Adam's pattern and Brianna's pattern?

Adam and Brianna each wrote the first 20 terms in their patterns.

C. How much smaller is the 20th term in Brianna's pattern than the 20th term in Adam's pattern? Explain how to determine the difference **without** expanding both patterns to the 20th term.

Clayton mapped out the city park on the coordinate grid shown.
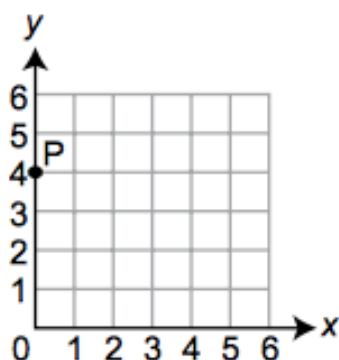
City Park
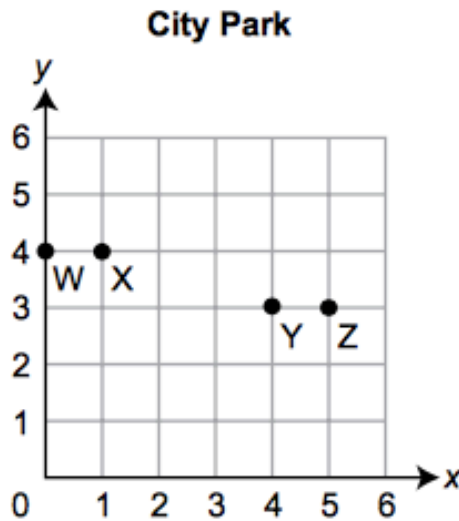
A drinking fountain is located at the point (1, 3). A statue in the park is located 4 units away from the drinking fountain. Which point could be the location of the statue?

A. point W
B. point X
C. point Y
D. point Z

Point P is shown on the coordinate grid below.

Which statement about point P is true?

A. Point P is on the x-axis and has an x-coordinate of 0.

B. Point P is on the x-axis and has a y-coordinate of 0.

C. Point P is on the y-axis and has an x-coordinate of 0.

D. Point P is on the y-axis and has a y-coordinate of 0.

The numbers shown below are used at the beginning of two different patterns.

2, 6, ___, ___, ___, · · ·

One pattern's rule is to add the same number each time. The other pattern's rule is to multiply by the same number each time. What is the **smallest** number greater than 6 that appears in both patterns?

A. 10

B. 12

C. 16

D. 18

The number of marbles in a jar is 4 times the difference between 17 and 12. Which expression can be used to find the number of marbles in the jar?

A. 4 × (17 − 12)

B. (17 − 12) + 4

C. 4 × 17 − 12

D. 17 × 12 − 4

Emma and Bella collect bugs for a science project.

- On Monday, Emma collects 15 bugs, and Bella collects 3 times as many bugs as Emma collects.

- On Tuesday, Emma collects 6 bugs, and Bella collects 8 times as many bugs as Emma collects.

Which expression can be used to find the total number of bugs the girls collect on both days?

A. $(15 + 6) \times (3 + 8)$

B. $(15 + 3) \times (6 + 8)$

C. $[15 + (3 \times 15)] + [6 + (8 \times 6)]$

D. $[15 \times (3 + 15)] + [6 \times (8 + 6)]$

Quadrilateral JKLM is shown below.

A quadrilateral is shown. The vertices around the quadrilateral are J, K, L, M. Each of the four sides are labeled 5 centimeters.

Which statement gives the **most** specific name for quadrilateral JKLM and the reason for that name?

A. Quadrilateral JKLM is a rhombus because it is a trapezoid and contains no right angles.

B. Quadrilateral JKLM is a rhombus because it is a parallelogram with all sides equal in length.

C. Quadrilateral JKLM is a parallelogram because it is a trapezoid with all sides equal in length.

D. Quadrilateral JKLM is a parallelogram because it is a trapezoid and because both pairs of opposite angles have equal measures.

Mason graphs point M on a coordinate grid to represent the number of pens (x) he bought and the number of dollars (y) he paid for the pens as shown below.

A coordinate grid is shown. The title of the coordinate grid is Pen Purchases. The label to the left of the y-axis is Number of Dollars. The numbers to the left of the y-axis are 0, 1, 2, 3, 4, 5, 6, 7, 8. The label below the x-axis is Number of Pens. The numbers below the x-axis are 0, 1, 2, 3, 4, 5, 6, 7, 8. The point on the coordinate grid is labeled M.

Franco will graph point F on the same coordinate grid to represent that he bought 3 **more** pens than Mason and paid $5 **more** than Mason. What ordered pair describes the location of point F?

A. (5, 8)

B. (6, 7)

C. (7, 6)

D. (8, 5)

Mitch is making some bread dough.

To make the bread dough, Mitch uses $5\frac{1}{2}$ cups of wheat flour, $1\frac{3}{4}$ cups of rice flour, and $\frac{2}{3}$ cup of white flour.

A. How many cups of flour, in total, does Mitch use? Show or explain all your work.

Luke works in the shipping department of a toy company. He sends toys in boxes that are each in the shape of a rectangular prism. The lengths, widths, and heights of all the boxes are whole numbers of inches.

Luke needs to find a box that has a total volume of 24 cubic inches.

A. Find a possible combination of length, width, and height, all in whole numbers of inches, of a box Luke could use.

Luke is shipping another toy that has a volume of 34 cubic feet. The box he will use has a base of 15 square feet and a height of 3 feet. The rest of the box will be filled with packing material.

B. What is the volume, in cubic feet, of the packing material Luke will need? Show or explain all your work.

Name: _____ Date: _____

1. Divide: $18 \div \frac{1}{12}$

   A. $\frac{2}{3}$

   B. $1\frac{1}{2}$

   C. 30

   D. 216

2. Joe writes a number with a 3 in the tenths place. Ellie also writes a number with a 3 as a digit. The value of the 3 in Ellie's number is 10 times the value of the 3 in Joe's number. Which number could be the one Ellie wrote?

   A. 324.67
   B. 423.67
   C. 426.37
   D. 426.73

3. An inequality is shown below.

   $$4.205 < \underline{\hspace{1cm}}$$

   Which number could be placed into the blank to make the inequality true?

   A. four and twenty-four hundredths
   B. four and twenty-seven thousandths
   C. four and two hundred five thousandths
   D. four and two hundred four thousandths

4. A number is multiplied by 4, then divided by 2, and finally multiplied by 0.5. How does the result compare to the original number?

    A.   The result is the same as the original number.

    B.   The result is four times the value of the original number.

    C.   The result is one-fourth the value of the original number.

    D.   The result cannot be compared to the original number without knowing the original number.

5. The expression below shows two fractions being added.

$$\frac{7}{12} + \frac{1}{18}$$

Which expression could be used to find the sum of the two fractions?

    A. $\dfrac{5}{6} + \dfrac{2}{6} + \dfrac{1}{6} + \dfrac{1}{6} + \dfrac{1}{6}$

    B. $\dfrac{5}{30} + \dfrac{1}{30} + \dfrac{1}{30} + \dfrac{1}{30}$

    C. $\dfrac{15}{36} + \dfrac{6}{36} + \dfrac{1}{36} + \dfrac{1}{36}$

    D. $\dfrac{30}{72} + \dfrac{12}{72} + \dfrac{2}{72} + \dfrac{1}{72}$

6. Priya has two pieces of fabric.

- One piece is $\frac{8}{12}$ foot in length.
- The other piece is $\frac{3}{12}$ foot in length.

Priya uses $\frac{9}{12}$ foot of the fabric to make a pillowcase. How many feet of fabric does Priya have remaining?

A. $\frac{1}{6}$

B. $\frac{1}{3}$

C. $\frac{11}{12}$

D. $1\frac{1}{6}$

7. Tanya makes a paper volcano in science class. She spends $\frac{1}{3}$ hour building the base, $\frac{1}{6}$ hour shaping the cone, and $\frac{1}{8}$ hour painting the outside. How many hours does Tanya spend making the volcano?

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

B. $\frac{3}{17}$

C. $\frac{5}{8}$

D. $\frac{15}{17}$

8. Cereal boxes are arranged on three different shelves in a grocery store.

- The top shelf is $42\frac{1}{2}$ inches in length and $14\frac{2}{5}$ inches in width.
- The middle shelf is $1\frac{2}{5}$ times the length of the top shelf and $1\frac{1}{2}$ times the width of the top shelf.
- The bottom shelf is $\frac{4}{5}$ times the length of the middle shelf and $\frac{3}{4}$ times the width of the middle shelf.

What are the length and the width of the bottom shelf?

A. length: $47\frac{3}{5}$ inches

    width: $12\frac{3}{20}$ inches

B. length: $47\frac{3}{5}$ inches

    width: $16\frac{1}{5}$ inches

C. length: $58\frac{7}{10}$ inches

    width: $20\frac{17}{20}$ inches

D. length: $59\frac{1}{2}$ inches

    width: $21\frac{3}{5}$ inches

9. Two expressions are described below.

expression R: multiply 35 by $\frac{6}{5}$

expression S: multiply 35 by $\frac{3}{4}$

Based on the descriptions, which statement is true?

A. The value of expression R is greater than 35 because $\frac{6}{5} < 1$.

B. The value of expression R is greater than 35 because $\frac{6}{5} > 1$.

C. The value of expression S is greater than 35 because $\frac{3}{4} < 1$.

D. The value of expression S is greater than 35 because $\frac{3}{4} > 1$.

10. The value of the expression shown below is 7.5.

$$0.75(2 + 6 \times 4 - 2 \times 7 - 2)$$

Each 2 in the expression is changed to a 3 to make a new expression. What is the difference in the values of the expressions?
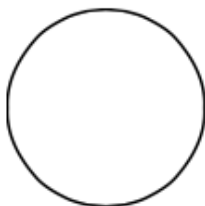
A. 1

B. 5.25

C. 8.5

D. 22.5

11. Which calculation is represented by the expression $(5 + 2) \div 9$?

A. divide five by nine, then add two

B. divide two by nine, then add five

C. divide the sum of five and two by nine

D. divide nine by the sum of five and two

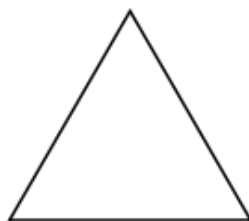**12.** The four shapes shown below repeat to form a pattern.

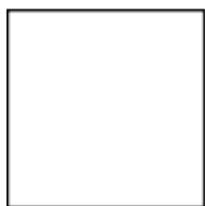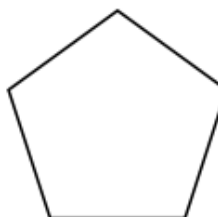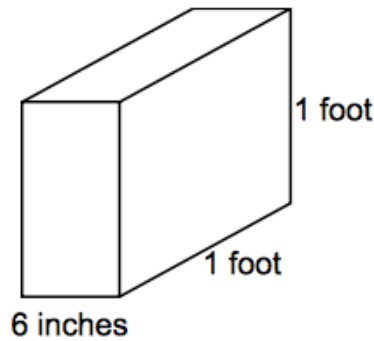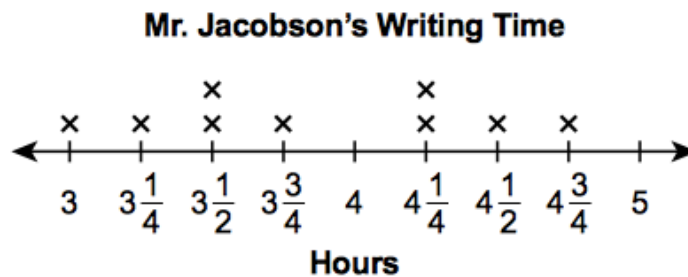The pattern continues. What is the 67th shape in the pattern?

A.

B.

C.

D.

13. A company uses boxes with the dimensions shown below. The width is in **inches**. The length and height are in **feet**.

1 foot

1 foot

6 inches

What is the volume, in **cubic inches**, of each box?

A.   6 cubic inches

B.   72 cubic inches

C.   600 cubic inches

D.   864 cubic inches

14. The line plot below shows the number of hours Mr. Jacobson spent writing for each of the last nine days.

Mr. Jacobson's Writing Time

$3 \quad 3\frac{1}{4} \quad 3\frac{1}{2} \quad 3\frac{3}{4} \quad 4 \quad 4\frac{1}{4} \quad 4\frac{1}{2} \quad 4\frac{3}{4} \quad 5$

Hours

What is the total number of hours Mr. Jacobson spent writing over the last nine days?

A.   31

B. $31\frac{6}{13}$

C. $34\frac{3}{4}$

D.   35

15. A bar graph is shown below, but some of the information is missing.

Title: _____

A: _____

B: _____
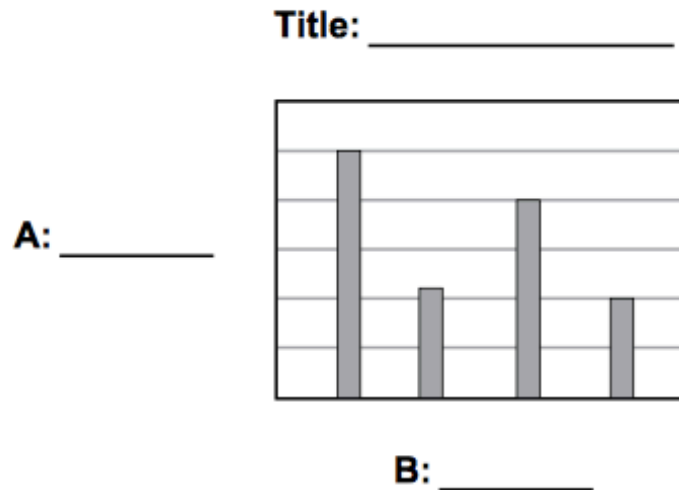
Which title and axis labels would be **most** appropriate for the graph?

A. Title: Leo's Plants
A: Type of Plant
B: Average Height (inches)

B. Title: Airplane Elevation
A: Elevation (feet)
B: Time since Start (minutes)

C. Title: Voting Results
A: Number of Voters
B: Candidate

D. Title: Movie Tickets
A: Number of Tickets
B: Total Cost ($)

16. The bottom of the rectangular prism shown below is covered by 1-inch cubes.
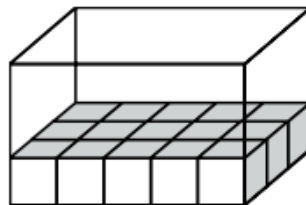
The height of the prism is 3 inches. Which statement explains how to determine the volume, in cubic inches, of the rectangular prism?

A. Add two more layers of the number of cubes in the bottom layer: 15 + 15 + 15.

B. Multiply the number of cubes in the bottom layer two more times: 15 × 15 × 15.

C. Add 3 to the number of cubes in the length and width of the bottom layer: 3 + 5 + 3.

D. Multiply the number of cubes in the bottom layer by the length and width of the bottom layer: 15 × 5 × 3.

On Monday, Derek rode his bike for 0.355×10^2 minutes.

A. Write the standard form for the number of minutes Derek rode his bike on Monday.

On Thursday, the number of minutes Derek rode his bike is shown below.

$$(4 \times 10) + (5 \times 1) + \left(8 \times \frac{1}{100}\right) + \left(2 \times \frac{1}{1,000}\right)$$

B. Write the word form for the number of minutes Derek rode his bike on Thursday.

17. *Continued.* Please refer to the previous page for task explanation.

On Saturday, Derek rode his bike 5.2409 miles. Derek rounds this distance to the nearest hundredth and gets 5.25 miles. Derek is incorrect.

C. Explain the correct way to round 5.2409 to the nearest hundredth using place value concepts. As part of your explanation, include the correctly rounded distance, to the nearest hundredth mile, Derek rode his bike.

1. Subtract: $124.8 - 9.34$

    A. 115.46

    B. 115.54

    C. 125.54

    D. 125.56

2. Carlos is adding the mixed numbers $1\frac{1}{5}$ and $2\frac{1}{8}$ by changing each number into an improper fraction. Which pair of improper fractions should Carlos use?

    A. $1\frac{1}{5} = \frac{8}{40}$ and $2\frac{1}{8} = \frac{5}{40}$

    B. $1\frac{1}{5} = \frac{16}{40}$ and $2\frac{1}{8} = \frac{15}{40}$

    C. $1\frac{1}{5} = \frac{48}{40}$ and $2\frac{1}{8} = \frac{50}{40}$

    D. $1\frac{1}{5} = \frac{48}{40}$ and $2\frac{1}{8} = \frac{85}{40}$

3. Maggie has two equal-sized boxes.

    • The first box is $\frac{3}{4}$ filled with beads.

    • The second box is $\frac{2}{3}$ filled with beads.

    Which shaded picture could be used to model the difference in the amounts each box is filled with beads?

    A.

    B.

    C.

    D.

4. Stephen has $\frac{1}{2}$ gallon of a chemical. He wants to put an equal amount of the chemical into each of 4 containers, using all of the chemical. Stephen wants to find the fraction of a gallon that will be in each container. Which equation correctly represents Stephen's problem?

A. $4 \times 2 = 8$

B. $4 \div \frac{1}{2} = 2$

C. $\frac{1}{2} \div 4 = \frac{1}{8}$

D. $\frac{1}{2} \times 4 = 2$

5. Which expression is equivalent to $\frac{6}{7} \times \frac{3}{4}$?

A. $\frac{6 \times 3}{7 \times 4}$

B. $\frac{6 \times 4}{7 \times 3}$

C. $\frac{6}{7}\left(\frac{1}{4}\right) \times \frac{3}{4}\left(\frac{1}{7}\right)$

D. $\frac{6}{7}(4) \times \frac{3}{4}(7)$

6. Kaitlin walked the length of a path in a park 3 times. The total distance she walked was less than 1 mile. What must be true about the length of the path in the park?

A. The length of the path must be shorter than $\frac{1}{3}$ mile.

B. The length of the path must be between $\frac{1}{3}$ and 1 mile.

C. The length of the path must be between 1 and 3 miles.

D. The length of the path must be longer than 3 miles.

7. Paul brings 4 quarts of potato salad to a picnic. Each serving of potato salad is $\frac{1}{8}$ quart. How many total servings of potato salad does Paul bring to the picnic?

    A. 2

    B. 4

    C. 12

    D. 32

8. A decimal number is multiplied by 10^6. Which statement describes the change in position of the decimal point in the decimal number as a result of the multiplication?

    A. The decimal point moves 5 places to the left.

    B. The decimal point moves 6 places to the left.

    C. The decimal point moves 6 places to the right.

    D. The decimal point moves 10 places to the right.

9. A number written in expanded form is shown below.

$$(8 \times 1{,}000) + (3 \times 100) + (2 \times 1) + \left(4 \times \frac{1}{10}\right) + \left(7 \times \frac{1}{1{,}000}\right)$$

What is the number written in standard form?

    A. 832.47

    B. 8,302.407

    C. 8,302.47

    D. 8,320.407

10. A scientist listed the volumes, in milliliters, of some liquids used in an experiment.

1.25 1.079 1.204 1.18

Which inequality correctly compares the volumes, in milliliters, of two of these liquids?

A. 1.25 < 1.204

B. 1.079 < 1.25

C. 1.18 > 1.204

D. 1.079 > 1.18

**11.** What is 27.462 rounded to the nearest tenth?

A. 20

B. 27.4

C. 27.5

D. 30

12. Juan is estimating the quotient of 9,648.18 ÷ 15.85. He first rounds both 9,648.18 and 15.85 to the nearest whole number. What should be Juan's estimated quotient?

A. 63

B. 603

C. 630

D. 6,030

13. Jerry has 56.92 centimeters (cm) of wire. He uses 2 pieces of the wire. Each piece he uses is 7.37 cm long. What is the length of the remaining wire, rounded to the nearest tenth of a centimeter?

A. 7.7 cm

B. 42.2 cm

C. 49.6 cm

D. 71.7 cm

14. Four points are plotted on the coordinate grid shown below.
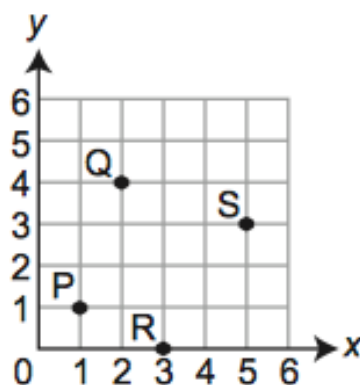
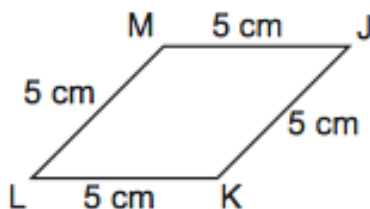Which statement about the plotted points is true?

A. Point P is located at the origin.

B. Point Q has 4 as its x-coordinate.

C. Point R is located on the y-axis.

D. Point S has 3 as its y-coordinate.

15. Mason graphs point M on a coordinate grid to represent the number of pens (x) he bought and the number of dollars (y) he paid for the pens as shown below.

Pen Purchases
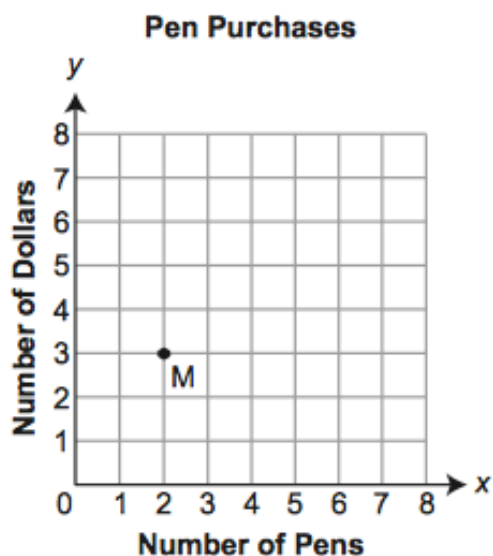
Franco will graph point F on the same coordinate grid to represent that he bought 3 **more** pens than Mason and paid $5 **more** than Mason. What ordered pair describes the location of point F?

A. (5, 8)

B. (6, 7)

C. (7, 6)

D. (8, 5)

16. Quadrilateral JKLM is shown below.

Which statement gives the **most** specific name for quadrilateral JKLM and the reason for that name?

A. Quadrilateral JKLM is a rhombus because it is a trapezoid and contains no right angles.

B. Quadrilateral JKLM is a rhombus because it is a parallelogram with all sides equal in length.

C. Quadrilateral JKLM is a parallelogram because it is a trapezoid with all sides equal in length.

D. Quadrilateral JKLM is a parallelogram because it is a trapezoid and because both pairs of opposite angles have equal measures.