

Grade 5 going into Grade 6 Summer Math Packet

*Please complete the following review pages and give to your grade 6 Math teacher the first day of school

*If you need to "refresh" your memory, please use websites such as Learnzillion to assist you

*Please also practice your skills on REFLEX MATH and PRODIGY over the summer :)

Name: _____

Teacher: _____

Multiplication and Division

$456 \times 17 =$

$544 \div 17 =$

$582 \times 33 =$

$3100 \div 25 =$

$1453 \times 72 =$

$4550 \div 14 =$

Numerical Expressions

Solve using order of operations:

$$12 + (8 \times 5) \times 2 - 9$$

Solve using order of operations:

$$12 + (4 + 3) \times 2 - 7$$

Solve using order of operations:

$$15 + [(12 - 3) + 7] - 5$$

Solve using order of operations:

$$[(12 - 4) \times (3 + 2)] - 4 + 7$$

Solve using order of operations:

$$9 \times 8 - 5 + 6 \times 4$$

Solve using order of operations:

$$7 + 8 - 4 + 3 \times 6 + 1$$

Place Value

How many times bigger is the 6 in 634,255 than the 6 in 16?

Solve:

$$13.4 \times 100$$

How many times small is the 4 in 43 than the 4 in 4,567?

How many times bigger is 45,776 than 45.776?

How many times smaller is 1.75 than 175?

How many times bigger is 567.8 than 5.678?

Solve:

$$4.62 \times 1000$$

Solve:

$$186.4 \div 10^2$$

Understanding Decimals

Write the following decimal in word form:

56.74

Write the following decimal in expanded form:

634.7

Write the following decimal in number form:

Seventy eight and sixty three hundredths

Write the following decimal in word form:

123.55

Round the following decimal to the nearest tenth:

53.467

Compare:

17.2 ___ 1.72

Compare:

3.154 ___ 3.15

Round the following decimal to the nearest whole number:

234.633

Decimal Operations

Solve: $14.2 + 15 + 16.34$

Solve: $56.32 - 17.64$

Solve: 4.32×15

Solve: $20.40 \div 5$

Adding Fractions

$$\frac{4}{5} + \frac{7}{10} =$$

$$\frac{3}{5} + \frac{8}{15} =$$

$$\frac{1}{6} + \frac{7}{12} =$$

$$\frac{3}{8} + \frac{1}{6} =$$

$$\frac{4}{7} + \frac{2}{14} =$$

$$\frac{1}{8} + \frac{2}{3} =$$

Subtracting Fractions

$$\frac{4}{5} - \frac{1}{10} =$$

$$\frac{4}{5} - \frac{8}{15} =$$

$$\frac{5}{6} - \frac{3}{12} =$$

$$\frac{3}{4} - \frac{1}{6} =$$

$$\frac{5}{7} - \frac{2}{14} =$$

$$\frac{7}{8} - \frac{1}{3} =$$

Adding Mixed Numbers

$$7\frac{1}{3} + 3\frac{2}{6} =$$

$$4\frac{4}{5} + 2\frac{1}{3} =$$

$$6\frac{1}{6} + 1\frac{1}{3} =$$

$$7\frac{7}{8} + 3\frac{1}{2} =$$

$$6\frac{4}{5} + 2\frac{1}{6} =$$

$$4\frac{1}{4} + 2\frac{1}{3} =$$

Subtracting Mixed Numbers

$$7\frac{1}{3} - 3\frac{2}{6} =$$

$$4\frac{4}{5} - 2\frac{1}{3} =$$

$$6\frac{1}{6} - 1\frac{1}{3} =$$

$$7\frac{7}{8} - 3\frac{1}{2} =$$

$$6\frac{4}{5} - 2\frac{1}{6} =$$

$$4\frac{1}{3} - 2\frac{1}{4} =$$

Multiplying Fractions

$$\frac{2}{3} \times \frac{4}{5}$$

$$\frac{1}{7} \times \frac{5}{6}$$

$$2\frac{2}{3} \times \frac{2}{5}$$

$$4 \times \frac{5}{7}$$

$$3\frac{1}{4} \times \frac{2}{7}$$

$$\frac{2}{3} \times 6$$

$$\frac{5}{6} \times \frac{4}{5}$$

$$3\frac{1}{5} \times \frac{4}{7}$$

$$6 \times \frac{7}{10}$$

$$\frac{9}{10} \times \frac{1}{3}$$

Dividing Whole Numbers and Unit Fractions

$$\frac{1}{3} \div 4$$

$$7 \div \frac{1}{6}$$

$$5 \div \frac{1}{3}$$

$$\frac{1}{2} \div 8$$

$$\frac{1}{4} \div 5$$

$$8 \div \frac{1}{3}$$

$$9 \div \frac{1}{6}$$

$$\frac{1}{5} \div 3$$

$$\frac{1}{5} \div 2$$

$$2 \div \frac{1}{6}$$

Converting Metric Measurement

<p>Rhonda ran 6 kilometers this morning before work. How many meters did she run?</p>	<p>Cathy is 85 centimeters tall. How tall is she in meters.</p>
<p>Cathy weighed her bunch of bananas at the store. It weights 3500 centigrams. How many grams did it weigh?</p>	<p>Jamal has a dog that weighs 75 grams. How many kilograms does it weigh?</p>
<p>John needed to measure out 35 decigrams for vinegar for a science experiment. How many milliliters did he need?</p>	<p>Callen ran 1782 decimeters yesterday. How many decameters did she run?</p>
<p>Jamaya needed 6 meters of string for her kite. She only has 560 centimeters. How many more centimeters of string does she need?</p>	<p>Katie set a goal to run 5 km every week. So far this week she has run 3600 meters. How many more meters does she need to run?</p>
<p>Cole needs 750 centigrams of water for his science fair experiment. He currently has 7 grams. How many more grams does he need?</p>	<p>Jamarcus lives 4 kilometers from Publix. He has driven 3600 meters so far. How many more meters does he need to drive to get to Publix?</p>

Converting Standard Measurement

Jamel ran 8 miles on Monday. How many yards did he run?

Frankie weighed his backpack with all his school supplies in it. It weighed 400 ounces. How much did it weigh in pounds?

Harry measured his plant. It was 30 inches tall. Jeremy's plant was 3 feet tall. Who had the taller plant? How many inches taller?

Cassie ran 5.4 miles yesterday. Jacob ran 26,400 feet. Who ran farther? How much farther?

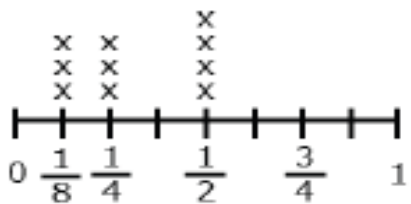
Allison needed 7 pounds of potatoes for her family stew recipe. She currently has 100 ounces of potatoes in her pantry. How many more pounds of potatoes does she need to buy?

Casper needs 78 inches of rope for his knot tying class. He currently has 6 feet. How many more feet does he need?

Line Plots

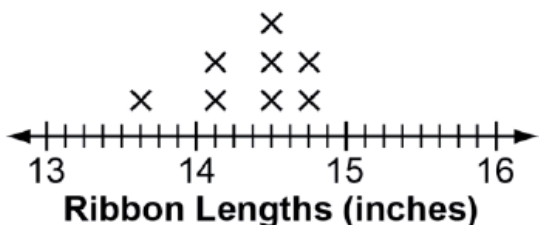
The line plot shown below shows the amount of liquid in liters in 10 beakers. If the liquid is redistributed equally, how much liquid would each beaker have?

Liquid in Beakers



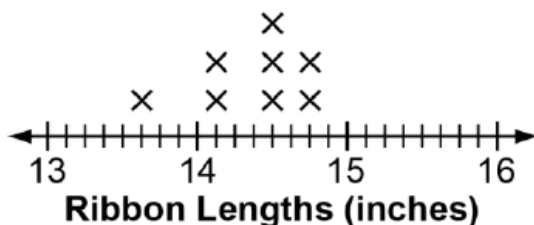
Amount of Liquid (in Liters)

Based on the values on the line plot, what is the total amount of ribbon Fran used?



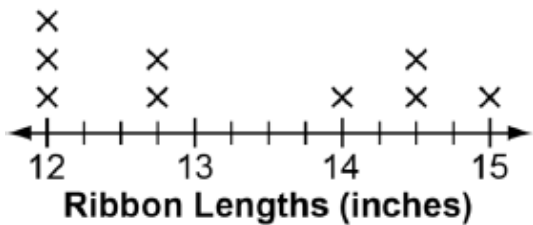
Ribbon Lengths (inches)

Based on the values in the line plot, how many ribbons did Fran make?



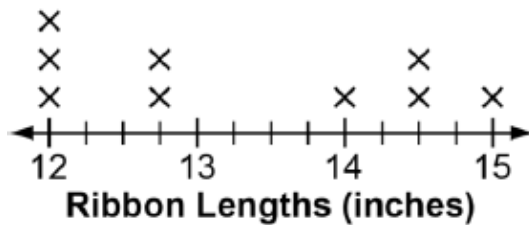
Ribbon Lengths (inches)

Based on the values on the line plot, what is the size of Kathy's smallest ribbon?



Ribbon Lengths (inches)

Based on the value on the line plot, what is the difference between Kathy's longest ribbon and her shortest ribbon?



Ribbon Lengths (inches)

Two Dimensional Shape Attributes

Select all the names that apply to a rhombus.

- a) Parallelogram
- b) Square
- c) Rectangle
- d) Quadrilateral
- e) Trapezoid

Select all the properties that both rectangles and squares share.

- a) right angles
- b) sides of equal length
- c) 2 pairs of parallel sides
- d) 2 pairs of sides with equal length
- e) 2 acute angles and 2 obtuse angles

Check the appropriate box for each statement.

	Always	Sometimes	Never
Polygons are squares.			
Rhombuses are parallelograms.			
Rectangles are squares.			
Squares are rectangles.			

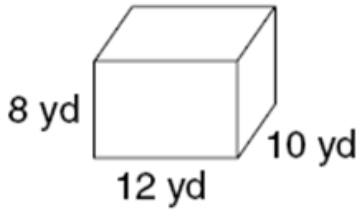
Think about the properties of each figure. Write the name of each figure in the correct box.

Square Trapezoid Parallelogram Rectangle Rhombus

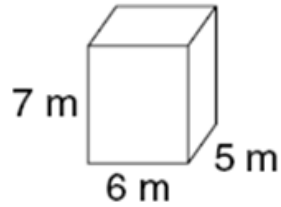
At Least 1 Pair of Parallel Sides	At Least 1 Right Angle

Volume

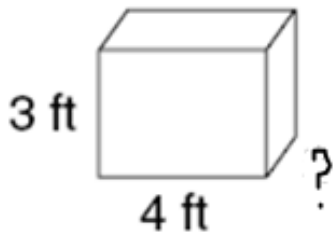
Find the volume.



Find the volume.

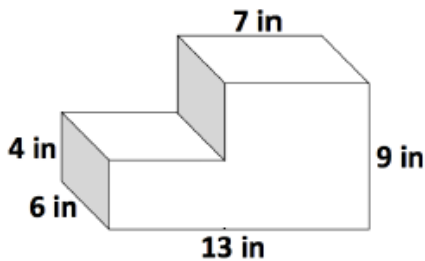


Find the missing side. The volume of the shape below is 132 ft^3 .

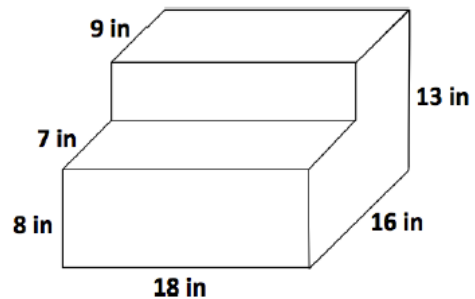


Find the height of a rectangular prism that has a length of 13 cm, a width of 10 cm and a volume of 650 cm^3 .

Find the total volume of this shape.

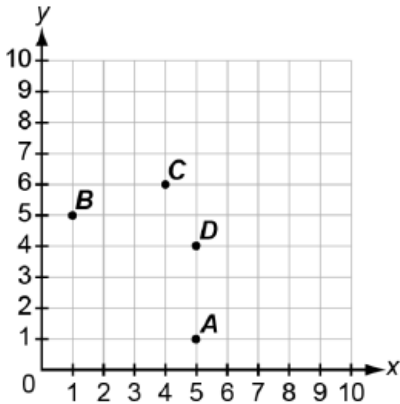


Find the total volume of this shape.

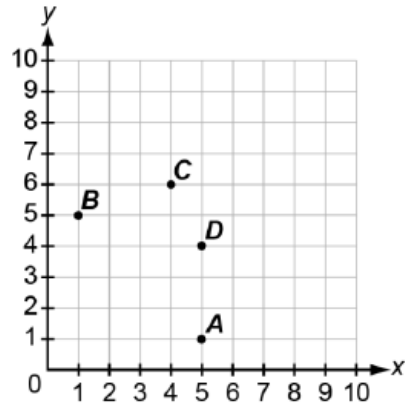


Coordinate Planes

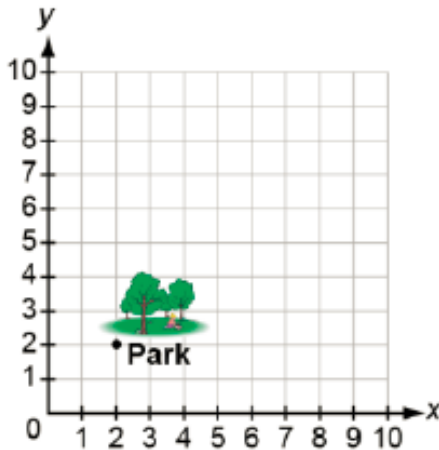
Which point is located at $(5, 1)$?



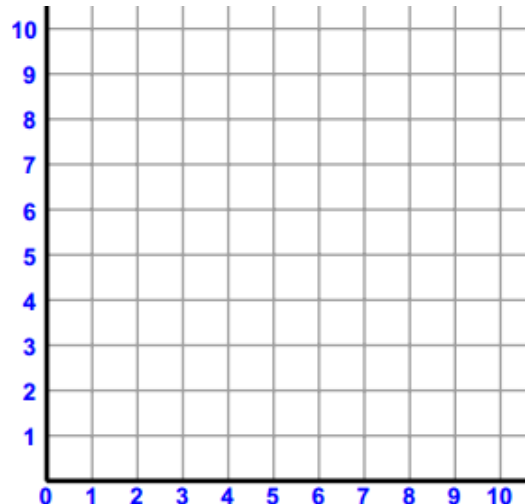
Write the ordered pair for point C.



Dan traveled from the Park to his house after school. He traveled 3 blocks up and 2 blocks to the right in order to get to his house. What is the ordered pair for the location of his house?



Point A has the coordinates $(3, 5)$. Point B is located 5 units above point A. Point C is located at $(7, 5)$. Plot points A, B and C. Then write the ordered pair that would create a rectangle with the points.



Patterns

Using the table below, create an equation that show how Pattern A and Pattern B are related to each other.

Pattern A	4	5	6	7	8
Pattern B	12	15	18	21	24

If Michael uses the rule "multiply by 2", help him complete the table below.

Michael's Pattern	
Term	Number
1	1
2	
3	

Callie and Bryn each created a numeric pattern. Both patterns start with 0. The term in Callie's pattern are always two times the same terms in Bryn's pattern. What could be the rules for the two patterns?

- a) Callie; Add 2 : Bryn; Add 0
- b) Callie; Add 6 : Bryn; Add 3
- c) Callie; Multiply by 2: Bryn; Multiply by 0
- d) Callie; Multiply by 6: Bryn; Multiply by 3

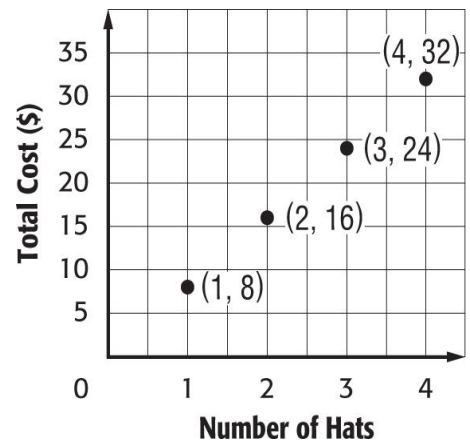
Write each rule (one for jar, one for pickles). Then explain how they are related?

Jars	2	4	6
Pickles	10	20	30

Write each rule (one for jars of sauce, one for tomatoes).

Jars of Sauce	1	2	3
Tomatoes	15	25	35

What would be the next 2 ordered pairs in the pattern?



Multiplication and Division

$$456 \times 17 = 7752$$

$$544 \div 17 = 32$$

$$582 \times 33 = 19206$$

$$3100 \div 25 = 124$$

$$1453 \times 72 = 104616$$

$$4550 \div 14 = 325$$

Numerical Expressions

Solve using order of operations:
 $12 + (8 \times 5) \times 2 - 9$

83

Solve using order of operations:
 $12 + (4 + 3) \times 2 - 7$

19

Solve using order of operations:
 $15 + [(12 - 3) + 7] - 5$

26

Solve using order of operations:
 $[(12 - 4) \times (3 + 2)] - 4 + 7$

43

Solve using order of operations:
 $9 \times 8 - 5 + 6 \times 4$

43

Solve using order of operations:
 $7 + 8 - 4 + 3 \times 6 + 1$

30

Place Value

How many times bigger is the 6 in 634,255 than the 6 in 16?

100000

Solve:

$$13.4 \times 100$$

1340

How many times small is the 4 in 43 than the 4 in 4,567?

1/1000

How many times bigger is 45,776 than 45.776?

1000

How many times smaller is 1.75 than 175?

1/100

How many times bigger is 567.8 than 5.678?

100

Solve:

$$4.62 \times 1000$$

4620

Solve:

$$186.4 \div 10^2$$

1.864

Understanding Decimals

Write the following decimal in word form:

56.74

Fifty six and seventy four hundredths

Write the following decimal in expanded form:

634.7

$$6 \times 100 + 3 \times 10 + 4 \times 1 + 7 \times 1/100$$

Write the following decimal in number form:

Seventy eight and sixty three hundredths

78.63

Write the following decimal in word form:

123.55

One hundred twenty three and fifty five hundredths

Round the following decimal to the nearest tenth:

53.467

53.5

Compare:

17.2 ___ 1.72

>

Compare:

3.154 ___ 3.15

<

Round the following decimal to the nearest whole number:

234.633

235

Decimal Operations

Solve: $14.2 + 15 + 16.34$

45.54

Solve: $56.32 - 17.64$

38.68

Solve: 4.32×15

64.8

Solve: $20.40 \div 5$

4.08

Adding Fractions

$$\frac{4}{5} + \frac{7}{10} =$$

$$\frac{15}{10} = 1\frac{5}{10}$$

$$\frac{3}{5} + \frac{8}{15} =$$

$$\frac{17}{15} = 1\frac{2}{15}$$

$$\frac{1}{6} + \frac{7}{12} =$$

$$\frac{9}{12}$$

$$\frac{3}{8} + \frac{1}{6} =$$

$$\frac{13}{24}$$

$$\frac{4}{7} + \frac{2}{14} =$$

$$\frac{10}{14}$$

$$\frac{1}{8} + \frac{2}{3} =$$

$$\frac{19}{24}$$

Subtracting Fractions

$$\frac{4}{5} - \frac{1}{10} =$$

$$\frac{7}{10}$$

$$\frac{4}{5} - \frac{8}{15} =$$

$$\frac{4}{15}$$

$$\frac{5}{6} - \frac{3}{12} =$$

$$\frac{7}{12}$$

$$\frac{3}{4} - \frac{1}{6} =$$

$$\frac{7}{12}$$

$$\frac{5}{7} - \frac{2}{14} =$$

$$\frac{8}{14}$$

$$\frac{7}{8} - \frac{1}{3} =$$

$$\frac{13}{24}$$

Adding Mixed Numbers

$$7\frac{1}{3} + 3\frac{2}{6} =$$

$$10\frac{4}{6}$$

$$4\frac{4}{5} + 2\frac{1}{3} =$$

$$6\frac{17}{15} = 7\frac{2}{15}$$

$$6\frac{1}{6} + 1\frac{1}{3} =$$

$$7\frac{3}{6}$$

$$7\frac{7}{8} + 3\frac{1}{2} =$$

$$10\frac{11}{8} = 11\frac{3}{8}$$

$$6\frac{4}{5} + 2\frac{1}{6} =$$

$$8\frac{29}{30}$$

$$4\frac{1}{4} + 2\frac{1}{3} =$$

$$6\frac{7}{12}$$

Subtracting Mixed Numbers

$$7\frac{1}{3} - 3\frac{2}{6} =$$

4

$$4\frac{4}{5} - 2\frac{1}{3} =$$

$2\frac{7}{15}$

$$6\frac{1}{6} - 1\frac{1}{3} =$$

$4\frac{5}{6}$

$$7\frac{7}{8} - 3\frac{1}{2} =$$

$4\frac{3}{8}$

$$6\frac{4}{5} - 2\frac{1}{6} =$$

$4\frac{19}{24}$

$$4\frac{1}{3} - 2\frac{1}{4} =$$

$2\frac{1}{12}$

Multiplying Fractions

$$\frac{2}{3} \times \frac{4}{5}$$

$$\frac{8}{15}$$

$$\frac{1}{7} \times \frac{5}{6}$$

$$\frac{5}{42}$$

$$2\frac{2}{3} \times \frac{2}{5}$$

$$\frac{16}{15} = 1\frac{1}{15}$$

$$4 \times \frac{5}{7}$$

$$\frac{20}{7} = 2\frac{6}{7}$$

$$3\frac{1}{4} \times \frac{2}{7}$$

$$\frac{26}{28}$$

$$\frac{2}{3} \times 6$$

$$\frac{12}{3} = 4$$

$$\frac{5}{6} \times \frac{4}{5}$$

$$\frac{20}{30}$$

$$3\frac{1}{5} \times \frac{4}{7}$$

$$\frac{64}{35} = 1\frac{29}{35}$$

$$6 \times \frac{7}{10}$$

$$\frac{42}{10} = 4\frac{2}{10}$$

$$\frac{9}{10} \times \frac{1}{3}$$

$$\frac{9}{30}$$

Dividing Whole Numbers and Unit Fractions

$$\frac{1}{3} \div 4$$

$$\frac{1}{12}$$

$$7 \div \frac{1}{6}$$

$$42$$

$$5 \div \frac{1}{3}$$

$$15$$

$$\frac{1}{2} \div 8$$

$$\frac{1}{16}$$

$$\frac{1}{4} \div 5$$

$$\frac{1}{20}$$

$$8 \div \frac{1}{3}$$

$$24$$

$$9 \div \frac{1}{6}$$

$$54$$

$$\frac{1}{5} \div 3$$

$$\frac{1}{15}$$

$$\frac{1}{5} \div 2$$

$$\frac{1}{10}$$

$$2 \div \frac{1}{6}$$

$$12$$

Converting Metric Measurement

<p>Rhonda ran 6 kilometers this morning before work. How many meters did she run?</p> <p>6000 m</p>	<p>Cathy is 85 centimeters tall. How tall is she in meters?</p> <p>0.85 m</p>
<p>Cathy weighed her bunch of bananas at the store. It weights 3500 centigrams. How many grams did it weigh?</p> <p>35 g</p>	<p>Jamal has a dog that weighs 75 grams. How many kilograms does it weigh?</p> <p>0.075 kg</p>
<p>John needed to measure out 35 decigrams for vinegar for a science experiment. How many milliliters did he need?</p> <p>3500 mg</p>	<p>Callen ran 1782 decimeters yesterday. How many decameters did she run?</p> <p>17.82 Dm</p>
<p>Jamaya needed 6 meters of string for her kite. She only has 560 centimeters. How many more centimeters of string does she need?</p> <p>40 cm</p>	<p>Katie set a goal to run 5 km every week. So far this week she has run 3600 meters. How many more meters does she need to run?</p> <p>1400 m</p>
<p>Cole needs 750 centigrams of water for his science fair experiment. He currently has 7 grams. How many more grams does he need?</p> <p>0.50 g</p>	<p>Jamarcus lives 4 kilometers from Publix. He has driven 3600 meters so far. How many more meters does he need to drive to get to Publix?</p> <p>400 m</p>

Converting Standard Measurement

Jamel ran 8 miles on Monday. How many yards did he run?

14,080 yards

Frankie weighed his backpack with all his school supplies in it. It weighed 400 ounces. How much did it weigh in pounds?

25 pounds

Harry measured his plant. It was 30 inches tall. Jeremy's plant was 3 feet tall. Who had the taller plant? How many inches taller?

Jeremy's plant was 6 inches taller.

Cassie ran 5.4 miles yesterday. Jacob ran 26,400 feet. Who ran farther? How much farther?

Cassie ran 0.4 miles farther.

Allison needed 7 pounds of potatoes for her family stew recipe. She currently has 100 ounces of potatoes in her pantry. How many more pounds of potatoes does she need to buy?

0.75 pounds

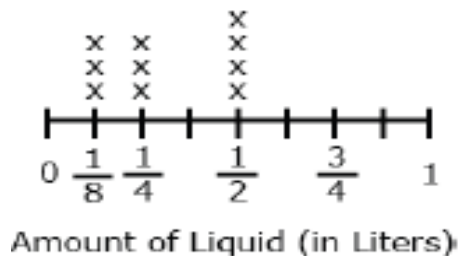
Casper needs 78 inches of rope for his knot tying class. He currently has 6 feet. How many more feet does he need?

0.5 feet

Line Plots

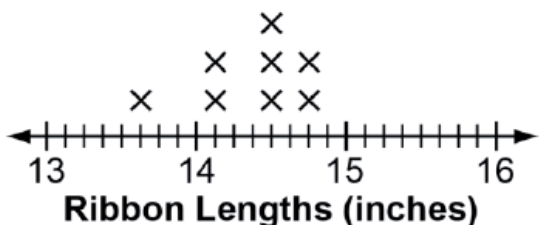
The line plot shown below shows the amount of liquid in liters in 10 beakers. How much total liquid did they have in beakers?

Liquid in Beakers



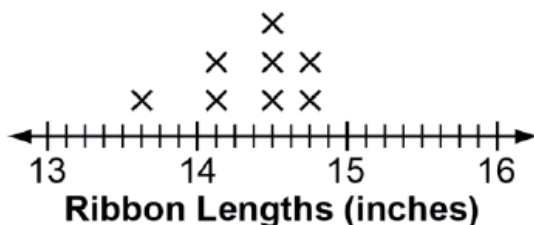
$$3\frac{1}{8}$$

Based on the values on the line plot, what is the total amount of ribbon Fran used?



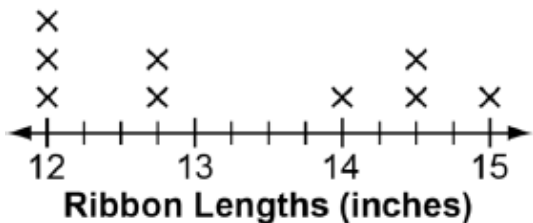
$$114\frac{7}{8} \text{ inches}$$

Based on the values in the line plot, how many ribbons did Fran make?



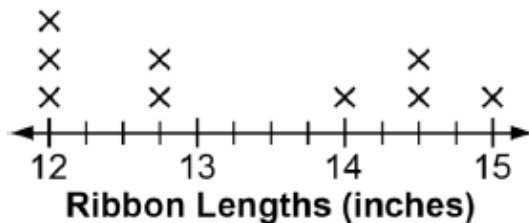
$$8$$

Based on the values on the line plot, what is the size of Kathy's smallest ribbon?



$$12$$

Based on the value on the line plot, what is the difference between Kathy's longest ribbon and her shortest ribbon?



$$3$$

Two Dimensional Shape Attributes

Select all the names that apply to a rhombus.

- a) Parallelogram
- b) Square
- c) Rectangle
- d) Quadrilateral
- e) Trapezoid

Select all the properties that both rectangles and squares share.

- a) right angles
- b) 4 sides of equal length
- c) 2 pairs of parallel sides
- d) 2 pairs of sides with equal length
- e) 2 acute angles and 2 obtuse angles

Check the appropriate box for each statement.

	Always	Sometimes	Never
Polygons are squares.		X	
Rhombuses are parallelograms.	X		
Rectangles are squares.			X
Squares are rectangles.	X		

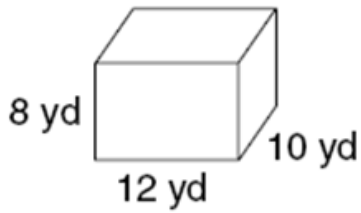
Think about the properties of each figure. Write the name of each figure in the correct box.

Square Trapezoid Parallelogram Rectangle Rhombus

At Least 1 Pair of Parallel Sides	At Least 1 Right Angle
Square Trapezoid Parallelogram Rectangle Rhombus	Square Rectangle

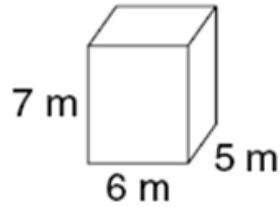
Volume

Find the volume.



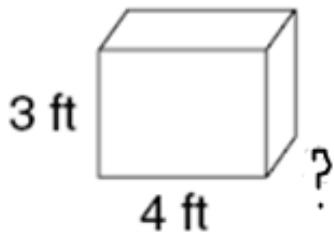
960 yd³

Find the volume.



210 m³

Find the missing side. The volume of the shape below is 132 ft³.

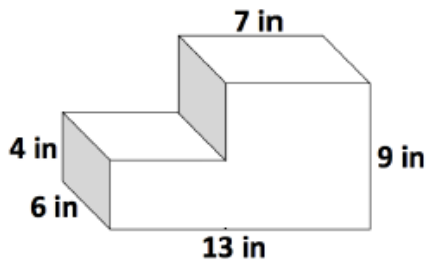


11 ft

Find the height of a rectangular prism that has a length of 13 cm, a width of 10 cm and a volume of 650 cm³.

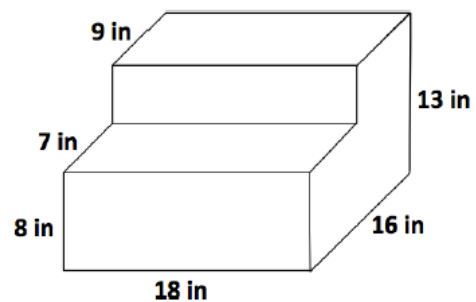
5 cm

Find the total volume of this shape.



522 inches³

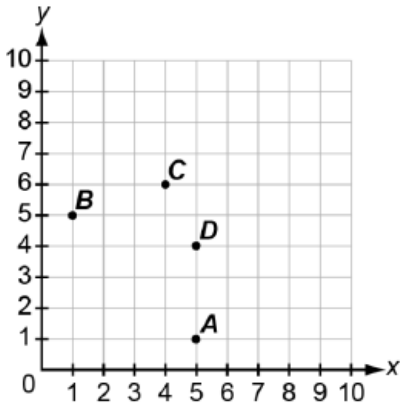
Find the total volume of this shape.



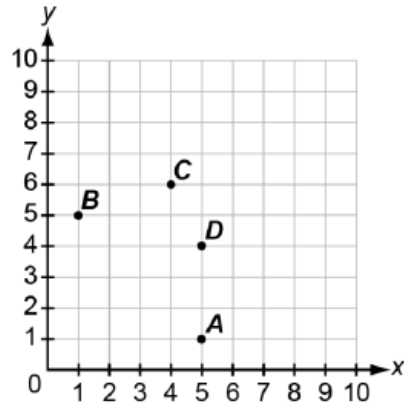
3114 inches³

Coordinate Planes

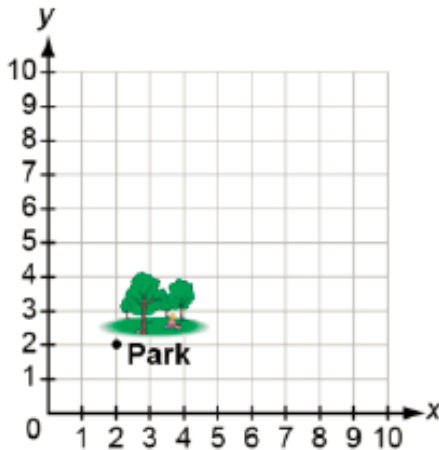
Which point is located at $(5, 1)$? **A**



Write the ordered pair for point C. **$(4, 8)$**

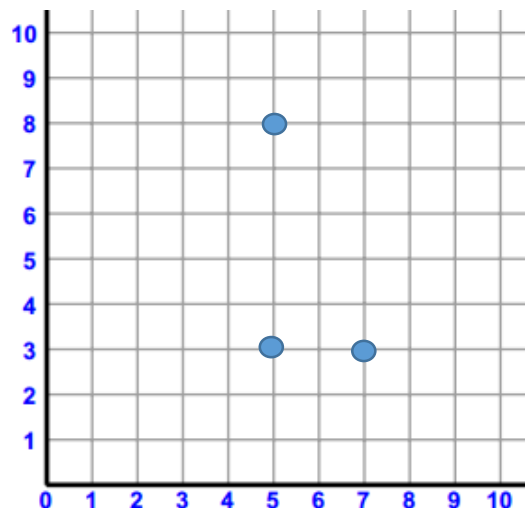


Dan traveled from the Park to his house after school. He traveled 3 blocks up and 2 blocks to the right in order to get to his house. What is the ordered pair for the location of his house? **$(4, 5)$**



Point A has the coordinates $(3, 5)$. Point B is located 5 units above point A. Point C is located at $(7, 5)$. Plot points A, B and C. Then write the ordered pair that would create a rectangle with the points.

$(7, 8)$



Patterns

Using the table below, create an equation that show how Pattern A and Pattern B are related to each other.

Pattern A	4	5	6	7	8
Pattern B	12	15	18	21	24

If Michael uses the rule "multiply by 2", help him complete the table below.

Term	Number
1	1
2	2
3	4
4	8
5	16

Callie and Bryn each created a numeric pattern. Both patterns start with 0. The term in Callie's pattern are always two times the same terms in Bryn's pattern. What could be the rules for the two patterns?

- a) Callie; Add 2 : Bryn; Add 0
- b) Callie; Add 6 : Bryn; Add 3
- c) Callie; Multiply by 2: Bryn; Multiply by 0
- d) Callie; Multiply by 6: Bryn; Multiply by 3

Write each rule (one for jar, one for pickles). Then explain how they are related?

Jars	2	4	6
Pickles	10	20	30

Jars: add 2, starting at 2
 Pickles: add 10 starting at 10

There are 5 pickles in each jar.

Write each rule (one for jars of sauce, one for tomatoes).

Jars of Sauce	1	2	3
Tomatoes	15	25	35

Jars of sauce: add 1, starting at 1
 Tomatoes: add 10, starting at 15

What would be the next 2 ordered pairs in the pattern? (5, 40) (6, 48)

