Mathematics

Intervention Activities

Pre- and Post-Assessment

Use the following Grade 5 Mathematics pre-/post-assessment pages to plan instruction and monitor progress.

DIRECTIONS FOR ADMINISTERING AND SCORING ASSESSMENTS

This assessment can be administered as a Pre-Assessment for planning instruction and then again as a Post-Assessment at year's end to monitor progress. The assessment can be administered to children individually or in a group. Detailed guidelines for administering and scoring the Pre-/Post-Assessment are presented below.

GUIDELINES FOR USING THE PRE-ASSESSMENT

This Pre-/Post-Assessment is 25 pages long. Each page targets a specific Mathematics concept or skill. Plan for about 40 minutes to administer the Pre-Assessment, but allow more time if needed. Children should be allowed to finish answering every item. Depending on the children and your situation, you may want to administer the Pre-Assessment in two parts in different sittings.

Read directions aloud to the student(s). Note where students succeed and where they struggle on the Individual Pre-/Post-Assessment Scoring Chart. Then use Everyday Mathematics Intervention Activity units to support these areas.

To Administer the Pre-Assessment:

- 1. Make a copy of the assessment for each child.
- 2. Have children write their names at the top of each assessment page.
- 3. Read the directions on each page and make sure children know what to do.
- 4. Have children complete each item with their best answer.
- 5. When children have finished, collect the assessments.

To Score the Pre-Assessment:

- 1. Make a copy of the Individual Pre-/Post-Assessment Scoring Chart (found on page 29 of this PDF) for each student.
- 2. Mark each question correct or incorrect on the assessment page using the Answer Key (found at the end of this PDF).
- 3. To find the total assessment score, count the number of items answered correctly.
- 4. Then write the number count in the Pre-Assessment column.
- 5. Add the total to assess overall performance, and use the correlating unit in the EIA Mathematics book to target skills that look like they require more support.

Using the Results:

- 1. Use the results of the Pre-Assessment to determine each student's current level of proficiency in the strategies and concepts being assessed.
- 2. As explained, the items in the Pre-Assessment measure strategies in particular skills. A student's score on a particular cluster can pinpoint specific instructional needs. A student who answers fewer than 50% of items in each cluster correctly may need focused instructional attention on those particular strategies.
- 3. Plotting scores on the Individual Pre-Assessment/Post-Assessment Scoring Charts provides a handy reference for monitoring students' growth and development. Such information can be used to identify the skills and strategies to be reinforced for a whole group, small group, or individual.
- 4. Store the Pre-Assessment/Post-Assessment Scoring Charts in an appropriate location for referral during the school year, and for end-of-year comparison of the Pre-Assessment and Post-Assessment scores.

GUIDELINES FOR USING THE POST-ASSESSMENT

The Post-Assessment is identical to the Pre-Assessment and should be administered and scored in the same way. Thus, the item numbers on the Individual Pre-/Post-Assessment Scoring Chart are the same for both assessments.

Use the results of the Post-Assessment to determine each student's current level of proficiency in the strategies being assessed. Compare the students' scores on the Pre-Assessment and Post-Assessment—and on each strategy cluster within the assessments—to evaluate the student's progress since the beginning of the year.

Grade 5 Mathematics Pre-/Post-Assessment	Recommended Everyday Mathematics Intervention Activities
Operations and Algebraic Thinking	Units 1–3
Number and Operations in Base Ten	Units 4–13
Number and Operations—Fractions	Units 14-19
Measurement and Data	Units 20–24
Geometry	Units 25–26

Use the order of operations. Evaluate each expression.



$$36 \div 9 - 3$$





$$36 \div (9 - 3)$$



$$(8 + 12) \times (29 - 22)$$



$$(75 \div 3) - (64 \div 8) =$$

Circle the matching expression for each statement.

- seven increased by 4
 - 7 4
 - 7 x 4
 - 7 + 4
 - 7 ÷ 4
- five more than the sum of eight and six
 - 5 + (8 + 6)
 - $(8 \times 6) + 5$
 - $(8 \div 6) + 5$
 - (8+6)-5

Write an expression for each statement. Then solve the problem.



divide 12 by 4, then multiply by 6



3 times the difference between 6 and 14

Complete each pattern.



Subtract 5	45		35	30	
Subtract 1	9	8			

2

Add 3	Add 6
3	6
6	12

Look for a relationship in the ordered pairs. Then write the rules.

3

X	y		
5	15		
10	30		
15	45		
20	60		

Relationship: _____

Rules: _____



X	y
40	5
32	4
24	3
16	2

Relationship: _____

Rules: _____

Complete the chart to show each number in each form.

Standard Form	Expanded Form	Word Form
7.18		seven and eighteen- hundredths
2	$40 + 5 + \frac{3}{10}$	forty-five and three-tenths
16.542	$10 + 6 + \frac{5}{10} + \frac{4}{100} + \frac{2}{1,000}$	
680.09		six hundred eighty and nine-hundredths

Solve each problem. Use patterns to help you.

Use a place-value chart to compare numbers. Write >, <, or = to complete each statement.



ones	•	tenths	hun- dredths	thou- sandths
7	•	6	9	3
7		9	6	3



ones	•	tenths	hun- dredths	thou- sandths
5	•	8	7	7
7		5	8	5

Compare. Use >, <, or =.

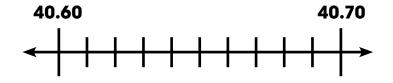




Solve each problem.

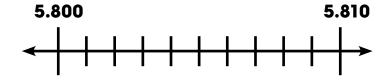


40.65 rounded to the nearest tenth is _____





5.804 rounded to the nearest hundredth is _____





47.4748 rounded to the nearest whole number is _____



30.427 rounded to the nearest tenth is _____

Find the product for each problem. Show your work.





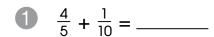


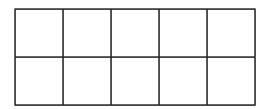


 $\stackrel{\textstyle \wedge}{\sum}$ Tell how you know where to align the digits when writing the quotient.

Find the product for each problem. Show your work.

Find the quotient for each problem. Show your work.





2 multiples of 4: ____, ____, ____, ____
multiples of 6: _____, ____, ____, ____ The least common multiple
of 4 and 6 is _____.

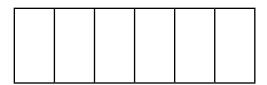
$$\frac{\frac{3}{4}}{+\frac{2}{6}} = \frac{\frac{3}{4}}{6} \times = = + = + = =$$

- Dylan ran $2\frac{3}{10}$ miles on Monday. He ran $1\frac{4}{5}$ miles on Tuesday. About how many miles did he run on Monday and Tuesday?

About _____ miles



$$\frac{7}{12} - \frac{2}{6} =$$





multiples of 8: ____, ____, ____

multiples of 2: ____, ____, ____, ____

The least common multiple of 8 and 2 is ____.



$$3\frac{5}{6}$$
 $-2\frac{1}{2}$

$$3\frac{5}{6} - 2\frac{1}{2} =$$



4 Ryan hiked $2\frac{3}{10}$ miles before lunch.

He hiked $3\frac{4}{5}$ miles after lunch.

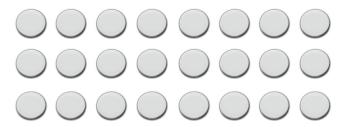
How many more miles did he hike after lunch?

_____ miles



$$\frac{1}{4}$$
 of 32

$$\frac{1}{4}$$
 x 32 = _____





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

$$\frac{12}{1} \times \frac{3}{4} = = =$$



$$\frac{5}{8}$$
 x 12

$$\frac{5}{8} \times \frac{12}{1} = \frac{12}{1} = \frac{12}{1}$$

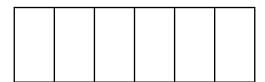
Ms. Rossi bought a 12-kilogram bag of dog food. Her dogs ate ⁷/₁₀ of the food in a month. How many kilograms of food did the dogs eat in a month?

_____ kilograms



$$\frac{1}{2}$$
 of $\frac{5}{6}$

$$\frac{1}{2} \times \frac{5}{6} =$$





$$\frac{1}{4} \times \frac{4}{8} =$$



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

Elena had $\frac{4}{5}$ kilogram of cat food. Her cat ate $\frac{3}{4}$ of the food yesterday. What fraction of a kilogram of food did her cat eat?

_____ kilogram

 $\frac{1}{2} \times 2\frac{3}{5}$

$$2\frac{3}{5} = \frac{\Box}{5}$$

$$\frac{1}{2} \times \frac{1}{5} = \underline{\hspace{1cm}}$$

 $1\frac{7}{8} \times \frac{2}{3}$

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

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

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

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

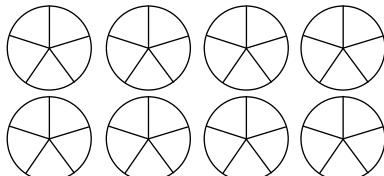
$$\frac{\Box}{4} \times \frac{\Box}{4} = \underline{\qquad}$$

A rug is $3\frac{2}{5}$ meters long and $2\frac{1}{4}$ meters wide. What is the area of the gym mat?

_____square meters

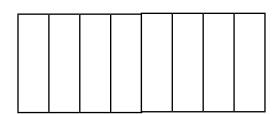


$$8 \div \frac{1}{5} =$$



2

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



(3)

4 Meg read the same amount each day. She read 1/3 of the book in 5 days. What part of the whole book did she read each day?

_____ of the book

4.5 centimeters = ____ millimeters

_____ X ____ = ____

2 4.5 liters = _____ milliliters

Oavid makes a fruit salad using 735 grams of peaches, 405 grams of strawberries, and 0.6 kilogram of grapes. How many kilograms of fruit salad did he make?

____ kg



4 It is a 3-kilometer hike to the campground. Fred runs for 500 meters and then walks for 1,800 meters. How many more kilometers must Fred hike to reach the campground?

_____ km

19,000 pounds = _____ tons

_____ ÷ ____ = ____

2 1689 ft = _____ yd

 $1689 \text{ ft} = \underline{\hspace{1cm}} \text{yd} \underline{\hspace{1cm}} \text{ft}$

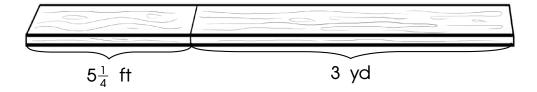
Rumi bought twelve drink boxes for a trip. Each box holds 8 fluid ounces of juice. How many quarts of juice is that?

_____ qts



Luca is building a skateboard ramp. He puts a board 5¹/₄ feet long end-to-end with a board that is 3 yards long. How many inches long are the boards together?

_____inches



Use the data in the table to complete the line plot.

Rainfall

Inches	Days
$1\frac{1}{4}$	111
2	П
$5\frac{3}{4}$	I
0	I

Daily Rainfall for first week in April (in inches)					

Use the line plot to answer the questions.

What is the difference from the least amount of rain to the greatest amount?

_____inches

What is the average amount of rainfall for the week?

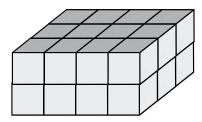
_____inches

4 What is the median rainfall for the week?

_____inches

What is the volume of this rectangular prism in cubic units?

The volume is _____



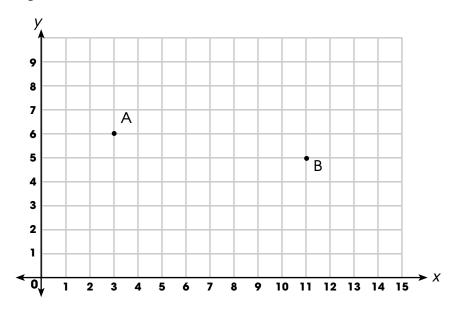
Nine cubic units fit in one layer of a box.
The box holds 2 more layers. What is the volume of the box?

_____ cubic units

- 3 length _____ width ____ height _____ 8 cm area of base ____ volume ____
- The volume of a cube is 216 cubic centimeters. What is the height of the cube?

____ cm

Use the coordinate grid for each problem.



- Write the ordered pair for point A. ______
- Write the ordered pair for point B.
- Graph point C on the coordinate grid. Use the ordered pair in the table.

X	У
3	8

4 Graph point D on the coordinate grid. Use the ordered pair in the table.

X	У
8	3

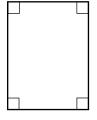
Draw each figure.

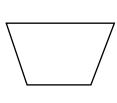
a quadrilateral that has one set of parallel sides but is not parallelogram

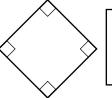
a quadrilateral that has one set of congruent sides and no right angles

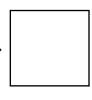
Classify each group of figures. Write "quadrilaterals," "parallelograms," or "rectangles."

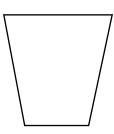
3



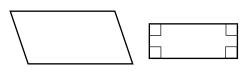




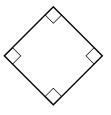


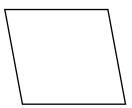












Individual Scoring Chart

Student Name	Pre-Assessment Date:	
	Post-Assessment Date:	

Skill	Assess- ment page	Pre- Assessment	Post- Assessment	EIA Vocabulary Unit
Order of Operations	4	/4	/4	Unit 1
Write and Interpret Expressions	5	/4	/4	Unit 2
Patterns and Ordered Pairs	6	/4	/4	Unit 3
Decimal Place Value	7	/4	/4	Unit 4
Powers of 10	8	/4	/4	Unit 5
Compare Decimals	9	/4	/4	Unit 6
Round Decimals	10	/4	/4	Unit 7
Multiply Whole Numbers	11	/4	/4	Unit 8
Divide by a One-Digit Divisor	12	/4	/4	Unit 9
Divide by a Two-Digit Divisor	13	/4	/4	Unit 10
Add and Subtract Decimals	14	/4	/4	Unit 11
Multiply Decimals	15	/4	/4	Unit 12
Divide Decimals	16	/4	/4	Unit 13
Add Fractions	17	/4	/4	Unit 14
Subtract Fractions	18	/4	/4	Unit 15
Multiply Whole Numbers and Fractions	19	/4	/4	Unit 16
Multiply Fractions	20	/4	/4	Unit 17
Multiply Mixed Numbers	21	/4	/4	Unit 18
Divide Whole Numbers and Fractions	22	/4	/4	Unit 19
Convert Among Metric Units	23	/4	/4	Unit 20
Convert Among Customary Units	24	/4	/4	Unit 21
Use Measurement Data	25	/4	/4	Unit 22
Understand & Find Volume	26	/4	/4	Unit 23 & 24
Graph Points on the Coordinate Plane	27	/4	/4	Unit 25
Classify Polygons	28	/4	/4	Unit 26
TOTAL		/100	/100	

ANSWER KEY

Use the order of operations. Evaluate each expression.



$$36 \div 9 - 3$$



$$36 \div (9 - 3)$$



$$(8 + 12) \times (29 - 22)$$

$$\frac{20}{20} \times \frac{7}{100} = \frac{140}{100}$$



$$(75 \div 3) - (64 \div 8) =$$

Circle the matching expression for each statement.

seven increased by 4

$$7+4$$

five more than the sum of eight and six

$$(8 \times 6) + 5$$

$$(8 \div 6) + 5$$

$$(8+6)-5$$

Write an expression for each statement. Then solve the problem.



divide 12 by 4, then multiply by 6

$$(12 \div 4) \times 6 = 18$$



3 times the difference between 6 and 14

$$3 \times (14 - 6) = 24$$

Complete each pattern.



Subtract 5	45	40	35	30	25
Subtract 1	9	8	7	6	5

2

Add 3	Add 6
3	6
6	12
9	18
12	24

Look for a relationship in the ordered pairs. Then write the rules.

(3

X	y		
5	15		
10	30		
15	45		
20	60		

Relationship: y = 3x

Rules: x:add 5

y: add 15



X	y		
40	5		
32	4		
24	3		
16	2		

Relationship: $y = x \div 8$

Rules: x: subtract 8

y: subtract 1

Complete the chart to show each number in each form.

Standard Form	Expanded Form	Word Form
7.18	7 + 1/10 + 8/100	seven and eighteen- hundredths
45.3	$40 + 5 + \frac{3}{10}$	forty-five and three-tenths
16.542	$10 + 6 + \frac{5}{10} + \frac{4}{100} + \frac{2}{1,000}$	sixteen and five hundred forty-two thousandths
680.09	600 + 80 + 9/100	six hundred eighty and nine-hundredths

Solve each problem. Use patterns to help you.

Use a place-value chart to compare numbers. Write >, <, or = to complete each statement.



ones		tenths	hun- dredths	thou- sandths
7	•	6	9	3
7		9	6	3

7.693 (7.963



ones	•	tenths	hun- dredths	thou- sandths
5	•	8	7	7
7		5	8	5

7.585 (>) 5.877

Compare. Use >, <, or =.



5.9 > 5.090

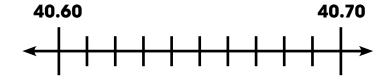


12.6 = 12.60

Solve each problem.

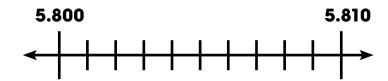
0

40.65 rounded to the nearest tenth is 40.7



2

5.804 rounded to the nearest hundredth is 5.80



3

47.4748 rounded to the nearest whole number is _____

4

Find the product for each problem. Show your work.



438



× 4 972



 $\frac{x-17}{357}$



× 56 4,536

 $\stackrel{\textstyle \wedge}{\sum}$ Tell how you know where to align the digits when writing the quotient.

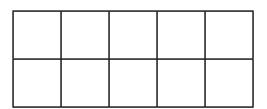
Find the product for each problem. Show your work.

$$0.09 \times 6 \times 6 \times 0.54$$

$$\begin{array}{r} & 64.08 \\ \times & 3.67 \\ \hline & \textbf{235.1736} \end{array}$$

Find the quotient for each problem. Show your work.

$$\frac{4}{5} + \frac{1}{10} = 9/10$$

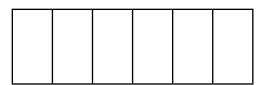


$$\frac{\frac{3}{4}}{\frac{+\frac{2}{6}}{6}} = \frac{\frac{3}{4} \times \frac{1}{4}}{\frac{2}{6} \times \frac{1}{4}} = \frac{\frac{1}{4}}{\frac{1}{4}}$$
 13/12 or 1 1/12

Dylan ran 2³/₁₀ miles on Monday.
 He ran 1⁴/₅ miles on Tuesday.
 About how many miles did he run on Monday and Tuesday?



$$\frac{7}{12} - \frac{2}{6} = 3/12 = 1/4$$





multiples of 8: ____, ____, ____

multiples of 2: ____, ____, ____, ____

The least common multiple of 8 and 2 is 8.



$$3\frac{5}{6} - 2\frac{1}{2} = \underline{\hspace{1cm}}$$



4 Ryan hiked $2\frac{3}{10}$ miles before lunch.

He hiked $3\frac{4}{5}$ miles after lunch.

How many more miles did he hike after lunch?

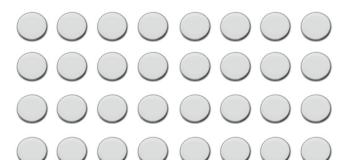
_____ miles

1 5/10 = 1 1/2



$$\frac{1}{4}$$
 of 32

$$\frac{1}{4}$$
 x 32 = 8



2

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

$$\frac{12}{1} \times \frac{3}{4} = \boxed{} = \boxed{}$$

3

$$\frac{5}{8}$$
 x 12

$$\frac{5}{8} \times \frac{12}{12} = \frac{7}{12} = \frac{7}{12}$$

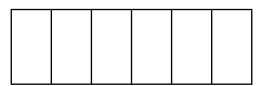
Ms. Rossi bought a 12-kilogram bag of dog food. Her dogs ate ⁷/₁₀ of the food in a month. How many kilograms of food did the dogs eat in a month?

$$8 \frac{4}{10} = 8 \frac{2}{5}$$



$$\frac{1}{2}$$
 of $\frac{5}{6}$

$$\frac{1}{2} \times \frac{5}{6} = 5/12$$





$$\frac{1}{4} \times \frac{4}{8} =$$

$$\frac{1}{4} \times \frac{4}{8} = \frac{1}{8}$$

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

$$\frac{2}{3} \times \frac{3}{6} = \frac{1}{3}$$

Elena had $\frac{4}{5}$ kilogram of cat food. Her cat ate $\frac{3}{4}$ of the food yesterday. What fraction of a kilogram of food did her cat eat?

3/5 kilogram

2
$$1\frac{7}{8} \times \frac{2}{3}$$

 $1\frac{7}{8} = 15/8$
 $\frac{1}{8} \times \frac{2}{3} = \frac{30}{24} = 5/4 = 1 \frac{1}{4}$

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

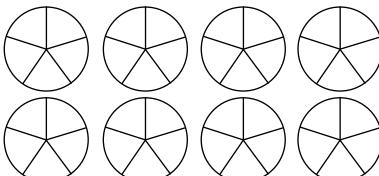
 $2\frac{3}{4} = \frac{1}{4} \cdot 1 \cdot \frac{1}{2} = \frac{3}{2}$
 $\frac{1}{4} \times \frac{1}{4} = \frac{3}{4} \times \frac{1}{8} = \frac{4}{4} \cdot \frac{1}{8}$

A rug is $3\frac{2}{5}$ meters long and $2\frac{1}{4}$ meters wide. What is the area of the gym mat?

_____square meters

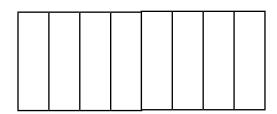


$$8 \div \frac{1}{5} = 40$$



2

$$\frac{1}{8} \div 2 = 1/16$$



3

Meg read the same amount each day. She read 1/3 of the book in 5 days. What part of the whole book did she read each day?

1/15 of the book

4.5 centimeters = ____ millimeters

- 2 4.5 liters = 4500 milliliters
- Oavid makes a fruit salad using 735 grams of peaches, 405 grams of strawberries, and 0.6 kilogram of grapes. How many kilograms of fruit salad did he make?



It is a 3-kilometer hike to the campground. Fred runs for 500 meters and then walks for 1,800 meters. How many more kilometers must Fred hike to reach the campground?

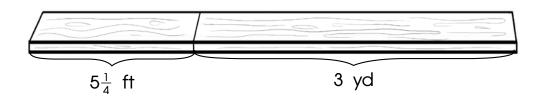
$$0.7_{\text{km}}$$

$$1689 \, \text{ft} = \underbrace{563}_{1689 \, \text{yd}} \underbrace{0}_{\text{ft}}$$

Rumi bought twelve drink boxes for a trip. Each box holds 8 fluid ounces of juice. How many quarts of juice is that?

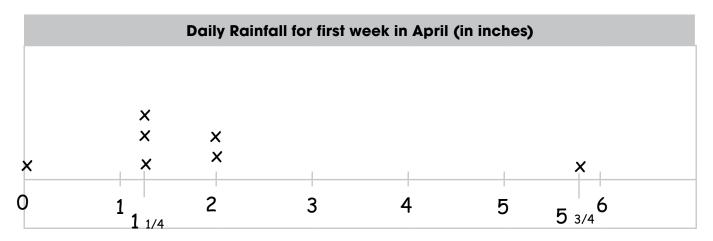


Luca is building a skateboard ramp. He puts a board 5¹/₄ feet long end-to-end with a board that is 3 yards long. How many inches long are the boards together?



Use the data in the table to complete the line plot.

Kainiali		
Inches	Days	
1 1/4	111	
2	П	
5 3/4	I	
0	I	



Use the line plot to answer the questions.

What is the difference from the least amount of rain to the greatest amount?

5 3/4 inches

3 What is the average amount of rainfall for the week?

1 13/14 inches

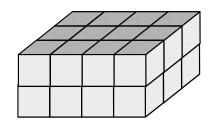
4 What is the median rainfall for the week?

1 1/4 inches

What is the volume of this rectangular prism in cubic units?

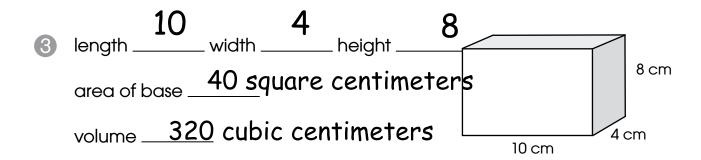
The volume is _____

$$4 \times 3 \times 2 = 24$$
 cubic units



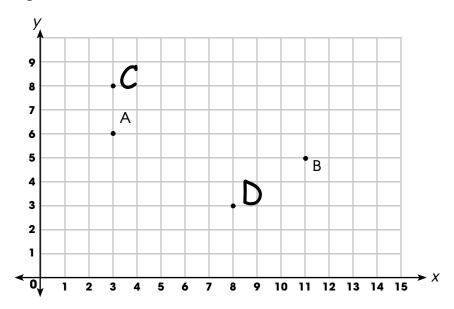
Nine cubic units fit in one layer of a box.
The box holds 2 more layers. What is the volume of the box?

27 cubic units



The volume of a cube is 216 cubic centimeters. What is the height of the cube?

___6 ____cm Use the coordinate grid for each problem.



- Write the ordered pair for point A. (3,6)
- 2 Write the ordered pair for point B. (11,5)
- Graph point C on the coordinate grid. Use the ordered pair in the table.

X	У
3	8

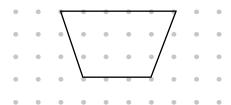
4 Graph point D on the coordinate grid. Use the ordered pair in the table.

X	У
8	3

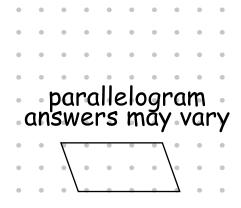
Draw each figure.

a quadrilateral that has one set of parallel sides but is not parallelogram

trapezoid answers may vary

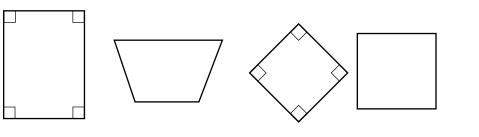


a quadrilateral that has one set of congruent sides and no right angles



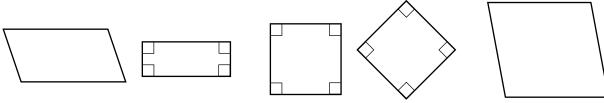
Classify each group of figures. Write "quadrilaterals," "parallelograms," or "rectangles."











parallelograms