Eureka Math™ Assessment Packet

Grade 5 Modules 5 & 6

Module 5

Mid-Module Assessment	Qty: 30
End-of-Module Assessment	Qty: 30

Module 6

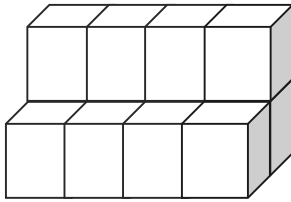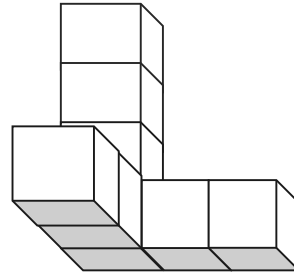|	
Mid-Module Assessment	Qty: 30
End-of-Module Assessment	Qty: 30

Name _____   Date _____

1. Tell the volume of each solid figure made of 1-inch cubes. Specify the correct unit of measure.

   a.

   b.

2. Jack found the volume of the prism pictured to the right by multiplying 5 × 8 and then adding 40 + 40 + 40 = 120. He says the volume is 120 cubic inches.

   8 in

   5 in

   3 in

   a. Jill says he did it wrong. He should have multiplied the bottom first (3 × 5) and then multiplied by the height. Explain to Jill why Jack's method works and is equivalent to her method.
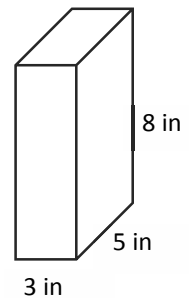
   b. Use Jack's method to find the volume of this right rectangular prism.

   5 ft

   2 ft   3 ft
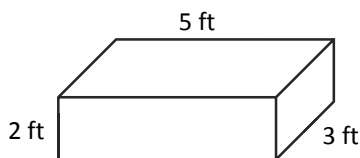
3. If the figure below is made of cubes with 2 cm side lengths, what is its volume? Explain your thinking.

4. The volume of a rectangular prism is 840 in³. If the area of the base is 60 in², find its height. Draw and label a model to show your thinking.
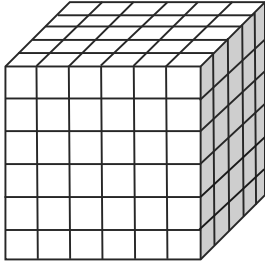
5. The following structure is composed of two right rectangular prisms that each measure 12 inches by 10 inches by 5 inches and one right rectangular prism that measures 10 inches by 8 inches by 36 inches. What is the total volume of the structure? Explain your thinking.
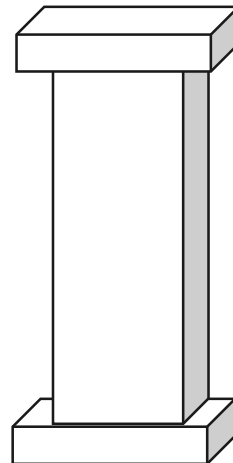
6. a. Find the volume of the rectangular fish tank. Explain your thinking.

45 cm

20 cm

10 cm
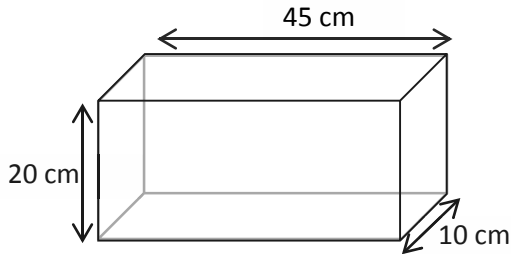
b. If the fish tank is completely filled with water and then 900 cubic centimeters are poured out, how high will the water be? Give your answer in centimeters, and show your work.

7. Juliet wants to know if the chicken broth in this beaker will fit into this rectangular food storage container. Explain how you would figure it out without pouring the contents in. If it will fit, how much more broth could the storage container hold? If it will not fit, how much broth will be left over? (Remember: $1 \text{ cm}^3 = 1 \text{ mL}$.)

4 L

2 L

Beaker

15 cm

7 cm

20 cm
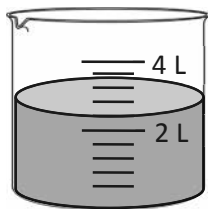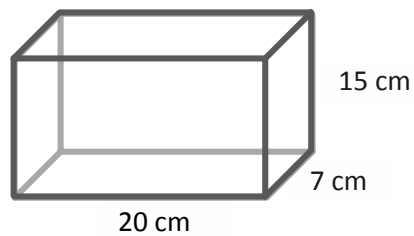
Storage Container

Name _____   Date _____

1. Use your ruler to draw a rectangle that measures $4\frac{1}{2}$ by $2\frac{3}{4}$ inches, and find its area.
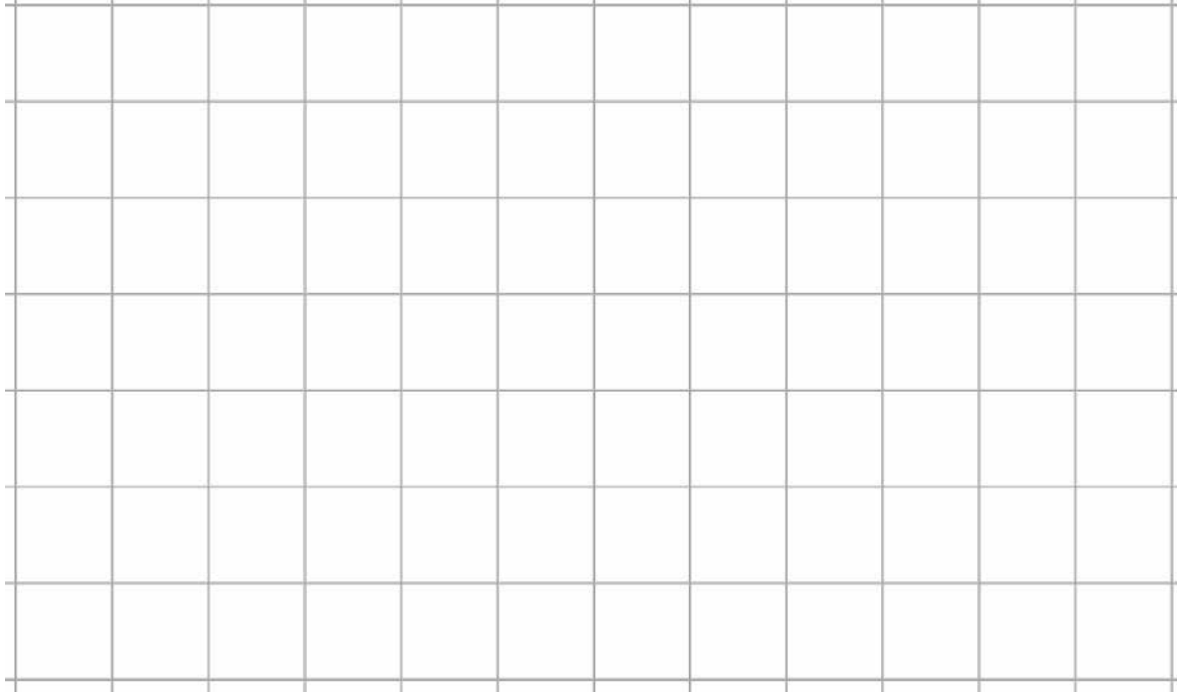
2. Heather has a rectangular yard. She measures it and finds out it is $24\frac{1}{2}$ feet long by $12\frac{4}{5}$ feet wide.

    a. She wants to know how many square feet of sod she will need to completely cover the yard. Draw the yard, and label the measurements.

    b. How much sod will Heather need to cover the yard?

    c. If each square foot of sod costs 65 cents, how much will she have to pay to cover her yard?

3. A rectangular container that has a length of 30 cm, a width of 20 cm, and a height of 24 cm is filled with water to a depth of 15 cm. When an additional 6.5 liters of water are poured into the container, some water overflows. How many liters of water overflow the container? Use words, pictures, and numbers to explain your answer. (Remember: 1 cm^3 = 1 mL.)

4. Jim says that a $2\frac{1}{2}$ inch by $3\frac{1}{4}$ inch rectangle has a section that is 2 inches × 3 inches and a section that is $\frac{1}{2}$ inch × $\frac{1}{4}$ inch. That means the total area is just the sum of these two smaller areas, or $6\frac{1}{8}$ in^2. Why is Jim incorrect? Use an area model to explain your thinking. Then, give the correct area of the rectangle.

5. Miguel and Jacqui built towers out of craft sticks. Miguel's tower had a 4-inch square base. Jacqui's tower had a 6-inch square base. If Miguel's tower had a volume of 128 cubic inches and Jacqui's had a volume of 288 cubic inches, whose tower was taller? Explain your reasoning.

6. Read the statements. Circle True or False. Explain your choice for each using words and/or pictures.

a. All parallelograms are quadrilaterals.   True   False

b. All squares are rhombuses.   True   False

c. Squares are rhombuses but not rectangles.   True   False

d. The opposite angles in a parallelogram have the same measure.   True   False

e. Because the angles in a rectangle are 90°, it is not a parallelogram.   True   False

f. The sum of the angle measures of any trapezoid is greater than the sum of the angle measures of any parallelogram.   True   False

g. The following figure is a parallelogram.   True   False

115°

60°
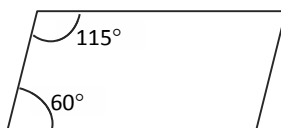
Name _____ Date _____

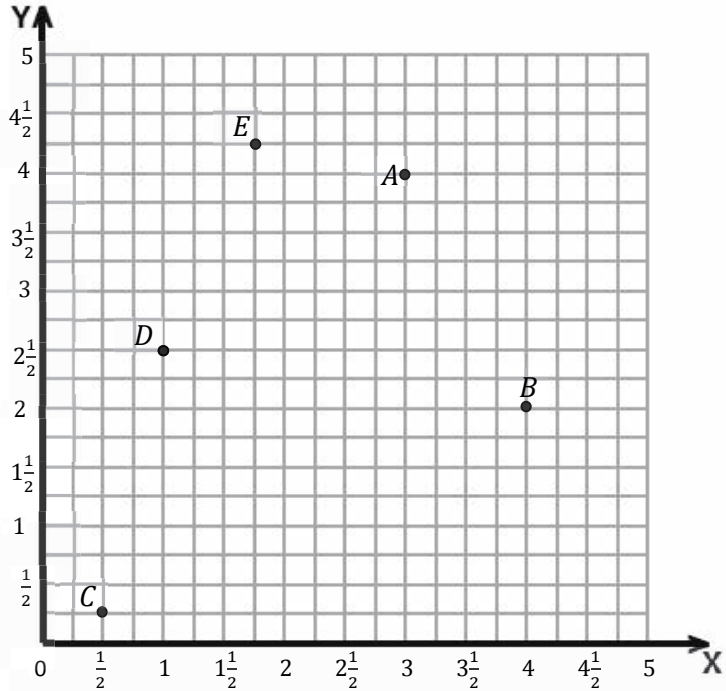1. Give the coordinates of each point.

A _____

B _____

C _____

D _____

E _____

2. Plot each point in the coordinate plane above, and label each point with F, G, or H.

F (0, 4) G (2, 1) H $(4\frac{3}{4}, 3\frac{3}{4})$

3.

a. Give coordinates for any three points that are on the same vertical line. Include at least one point that has a mixed number as a coordinate.

b. Give coordinates for any three points that are on the same horizontal line. Include at least one point that has a fraction as a coordinate.

4. Garrett and Jeffrey are planning a treasure hunt. They decide to place a treasure at a point that is a distance of 5 units from the x-axis and 3 units from the y-axis. Jeffrey places a treasure at point J, and Garrett places one at point G. Who put the treasure in the right place? Explain how you know.
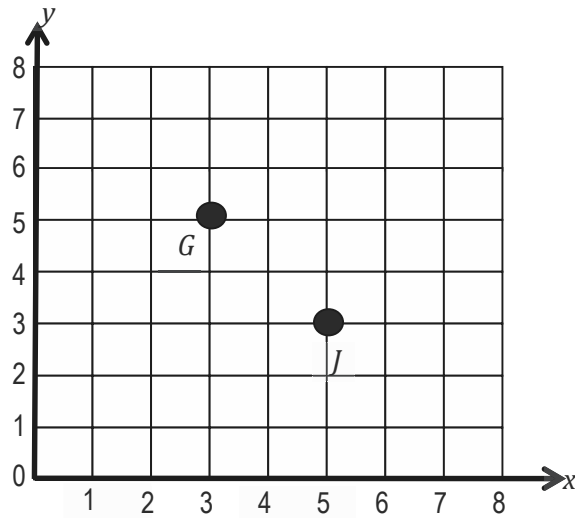
5.

a. Find the y-coordinates by following the rules given for each table.

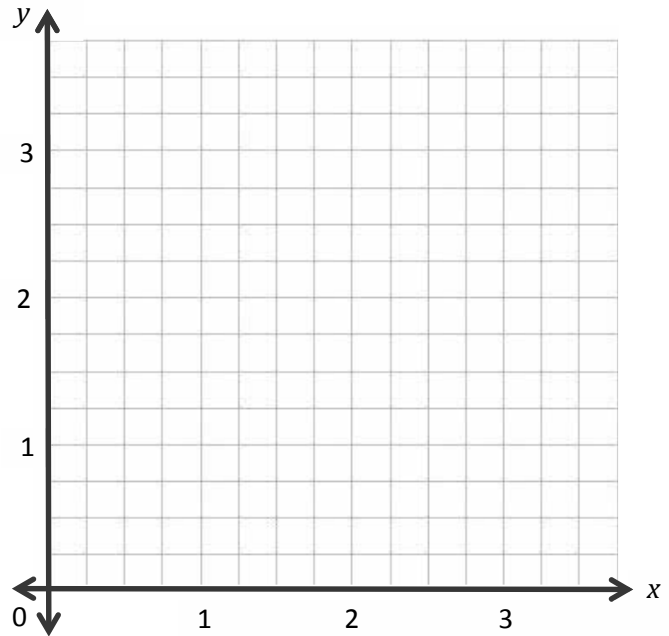Table A: Multiply by $\frac{1}{2}$.

x	y
0	
1	
2	
3	

Table B: Multiply by $\frac{1}{4}$.

x	y
0	
1	
2	
3	

b. Graph and label the coordinate pairs from Table A. Connect the points, and label the line a. Graph and label the coordinate pairs from Table B. Connect the points, and label the line b.

c. Describe the relationship between the y-coordinates in Table A and Table B that have the same x-coordinate.

6.

   a.   Use the graph to give the coordinate pairs of the points marked on the line.
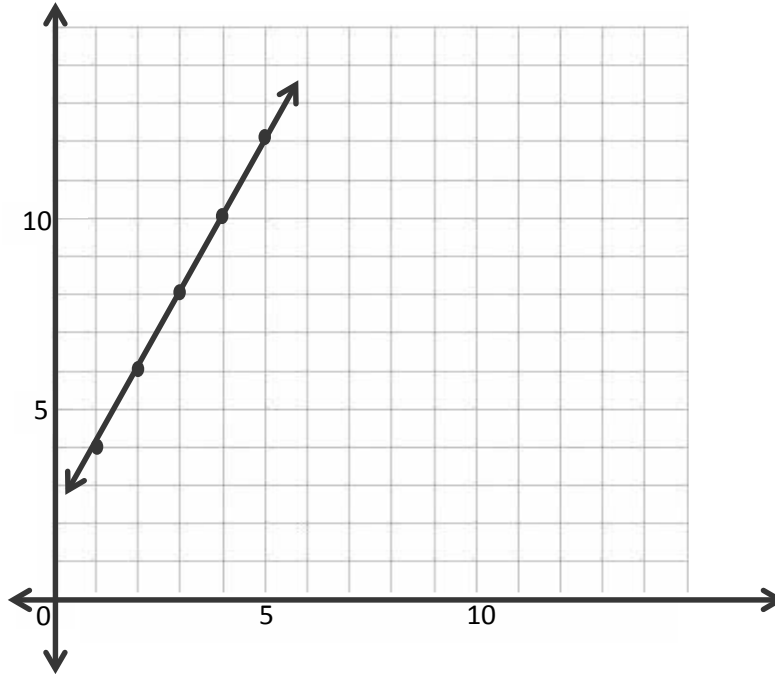
x	y

   b.   Using this rule, generate three more points that would be on this line but lie beyond the portion of
        the coordinate plane that is pictured.
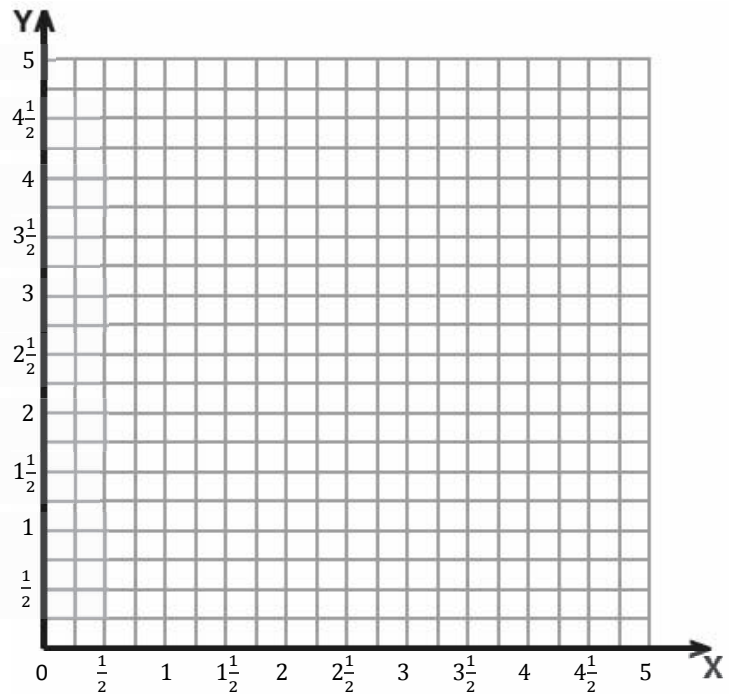
   _____   _____   _____

Name _____   Date _____

1. Follow the directions.

    a. Draw a ray that starts at point L at $(1\frac{1}{2}, 3)$ and includes point K at $(5, 3)$. Label points K and L.

    b. Give the coordinates of three other points on the ray.

    c. Draw a second ray with the same initial point and containing point M with coordinates $(3\frac{1}{2}, 4\frac{1}{4})$. Label point M.

2. David draws a line segment from point Q $(\frac{1}{4}, \frac{7}{8})$ to point R $(\frac{5}{8}, \frac{1}{2})$. He then draws a line perpendicular to the first segment that intersects segment $\overline{QR}$ and includes point S $(\frac{3}{4}, 1)$.

    a. Draw $\overline{QR}$, and label the endpoints on the grid.

    b. Draw the perpendicular line, and label point S.

    c. Name another point that lies on the perpendicular line whose x-coordinate is between 1 and $1\frac{1}{2}$.
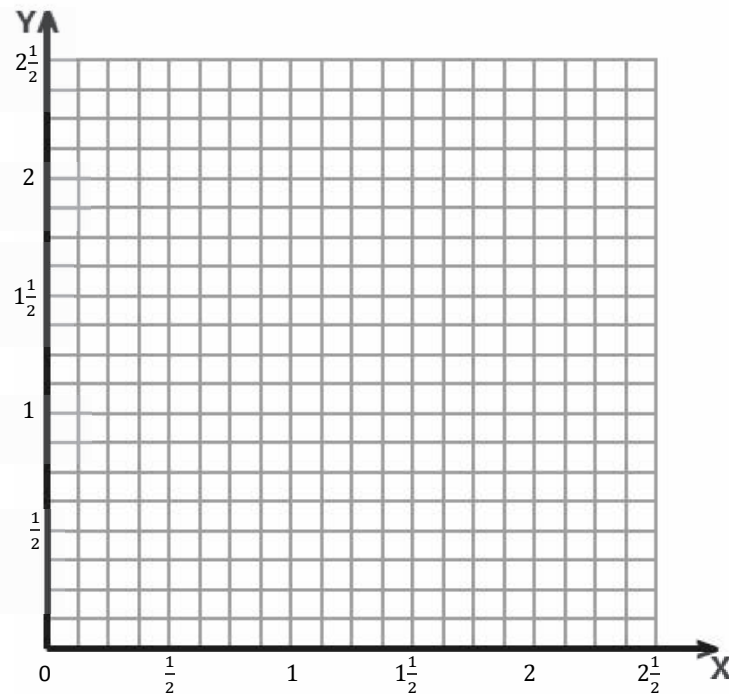
3. Complete the table for the rule *multiply by 2 and then add 2* for the values of x from 0 to 4. Then, use the coordinate plane to answer the questions.
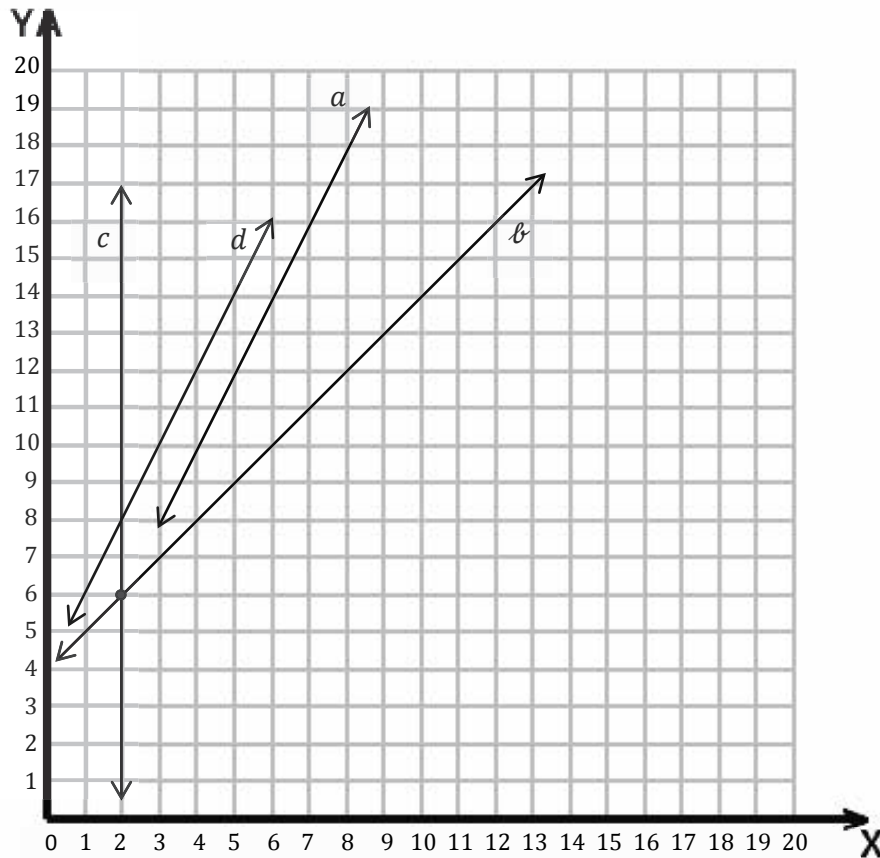
x	y	(x, y)
0		
1		
2		
3		
4		

a. Which line shows the rule in the table?

b. Give the coordinates for the intersection of lines b and c.

c. Draw a line on the graph such that any point on the line has a y-coordinate of 2. Label your line as e.

d. Which coordinate is 2 for any point on line c?

e. Write a rule that tells how to find the y-coordinate when the x-coordinate is given for the points on line b.

f. Kim and Lacy want to draw a line on the coordinate plane that is parallel to line a. Kim uses the rule *multiply by 4 and add 2* to generate her y-coordinates. Lacy uses the rule *multiply by 2 and add 4* to generate her y-coordinates. Which girl's line will be parallel to line a? Without graphing the lines, explain how you know.

4. An airplane is descending into an airport. When its altitude is 5 miles, it is 275 miles from the airport. When its altitude is 4 miles, it is 200 miles from the airport. At 3 miles, it is 125 miles from the airport.

a. If the pilot follows the same pattern, what will the plane's altitude be at 50 miles from the airport?

b. For the plane to land at the airport, the altitude will need to be 0, and the distance from the airport will need to be 0. Should the pilot continue this pattern? Why or why not?

Altitude (in Miles)

Miles from Airport