Name: _____

MATH INSTRUCTION
5th Grade, Ms. Campione

Each day you will complete a new lesson in the Eureka Math Succeed book by reading the homework helper and if available, watching a video on www.khanacademy.org. You will complete the practice pages following the lesson. You will also complete a daily review.

Lesson Instructions:

1. Read the Homework Helper pages.
2. Watch the corresponding video on Khan Academy. You can use a computer, laptop, tablet, or smartphone, if available. This step is not necessary but will give more explanation.
3. Complete all problems on the pages following the lesson.

Daily Review

1. Each day you will complete a set of review problems.
2. Please complete the problems on scratch paper. Make sure to show your work.

Day 1:

Lesson: Module 5 Lesson 10

- Homework Helper pages 39-40
- https://www.khanacademy.org/math/5th-engage-ny/engage-5th-module-5/5th-module-5-topic-c/v/example-finding-area-with-fractional-sides
- Complete pages 41-42

Daily Review

- Week #20 Day 1 (4 problems). Complete the problems on scratch paper.

Day 2:

Lesson: Module 5 Lesson 11

- Homework Helper pages 43-45
- https://www.khanacademy.org/math/5th-engage-ny/engage-5th-module-5/5th-module-5-topic-c/v/intuition-for-area-with-fractional-side-lengths
- Complete pages 47-48

Daily Review

- Week #20 Day 2 (4 problems). Complete the problems on scratch paper.

Day 3:

Lesson: Module 5 Lesson 16

- Homework Helper page 65
- https://www.khanacademy.org/math/5th-engage-ny/engage-5th-module-5/5th-module-5-topic-d/v/quadrilateral-overview
- Complete pages 67-68

Daily Review

- Week #20 Day 3 (4 problems). Complete the problems on scratch paper.

Day 4:

Lesson: Module 5 Lesson 17

- Homework Helper pages 69-70
- https://www.khanacademy.org/math/5th-engage-ny/engage-5th-module-5/5th-module-5-topic-d/v/quadrilateral-properties
- https://www.khanacademy.org/math/5th-engage-ny/engage-5th-module-5/5th-module-5-topic-d/v/quadrilateral-types-exercise
- Complete pages 71-72

Daily Review

- Week #20 Day 4 (4 problems). Complete the problems on scratch paper.

Day 5:

Lesson: Module 5 Lesson 18

- Homework Helper page 73
- https://www.khanacademy.org/math/5th-engage-ny/engage-5th-module-5/5th-module-5-topic-d/v/classifying-shapes
- Complete pages 75-76

Daily Review

- Week #20 Assessment (10 problems). Complete the problems on scratch paper.

Day 6:

Lesson: Module 6 Lesson 1

- Homework Helper pages 91-92
- https://www.khanacademy.org/math/5th-engage-ny/engage-5th-module-6/5th-module-6-topic-a/v/introduction-to-the-coordinate-plane
- Complete pages 93-94

Daily Review

- Week #21 Day 1 (4 problems). Complete the problems on scratch paper.

Day 7:

Lesson: This lesson is printed. It is not in the book. Look over the coordinate grid page. These words are important to know.

- Reteach 24.1. Read over the top to learn how to locate points on a grid. Complete the problems.
- https://www.khanacademy.org/math/5th-engage-ny/engage-5th-module-6/5th-module-6-topic-a/v/introduction-to-the-coordinate-plane
- Complete Practice 24.1

Daily Review

- Week #21 Day 2 (4 problems). Complete the problems on scratch paper.

Day 8:

Lesson: This lesson is printed. It is not in the book. Look over the coordinate grid page. These words are important to know.

- Reteach 24.2. Read over the top to learn how to plot ordered pairs (points). Complete the problems.
- https://www.khanacademy.org/math/5th-engage-ny/engage-5th-module-6/5th-module-6-topic-a/v/graphing-points-exercise
- Complete Practice 24.2

Daily Review

- Week #21 Day 3 (4 problems). Complete the problems on scratch paper.

Day 9:

Lesson: This lesson is printed. It is not in the book. Look over the coordinate grid page. These words are important to know.

- Reteach 24.5. Read over the top to learn how to use a graph. Complete the problems.
- Complete Practice 24.5

Daily Review

- Week #21 Day 4 (4 problems). Complete the problems on scratch paper.

Day 10:

Lesson: Module 6 Lesson 4

- Homework Helper pages 107-108
- Complete pages 109. Use the attached Battleship grids to play the game.

Daily Review

- Week #21 Assessment (10 problems). Complete the problems on scratch paper.

Name_____

Week #20

Day 1

Write an expression for the calculation *the sum of the products of 4 and 3 and 1 and 1.*	Write <, >, or = to make the statement true. 16.272 ◯ 1.672
824 × 34 =	Find the area of the rectangle. $\frac{3}{10}$ ft. 5 ft.

Day 2

8,624 ÷ 98 =	What is the value of 2 in 0.259?
Sally needs $1\frac{3}{4}$ yards of fabric to make a dress. She has $4\frac{5}{8}$ yards. How many yards of fabric will be left over?	Round 81.139 to the nearest tenth.

Day 3

47 × 0.76 =	Write 437.04 in expanded form.
Ms. Benson has 89 yards of string. If she wants to give each of her 15 students an equal amount of string, how much will each student get? Write the answer as a mixed number.	0.1 ÷ 0.2 =

Day 4

$\frac{1}{3} - \frac{1}{5}$ =	7.165 + 4.181 =
$\frac{5}{6} \times 4$ =	4 + 27 ÷ (4 + 5) =

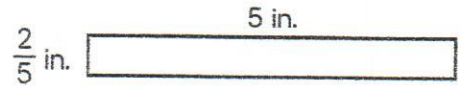
Name_____

Week #20 Assessment

1. Mr. Novak gives 9 packs of paper to a group of 5 students. If the group shares the paper equally, how many packs of paper does each student get? Write the answer as a mixed number.

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

3. Find the area of the rectangle.



4. $(16 - 7) - (2 \times 4) =$

5. Write an expression for the calculation *the difference of the products of 5 and 2 and 5 and 1.*

6. What is the value of 5 in 43.245?

7. Write 3,543.21 in expanded form.

8. Write <, >, or = to make the statement true.

17.881 ◯ 17.818

9. Round 14.613 to the nearest tenth.

10. Kaylen has two packages to mail. Her packages weigh $6\frac{1}{8}$ pounds total. If her first package weighs $4\frac{1}{2}$ pounds, how many pounds does her second package weigh?

5.OA.1, 5.OA.2, 5.NBT.1, 5.NBT.3, 5.NBT.4, 5.NF.2, 5.NF.3, 5.NF.4

Name_____

Week #21

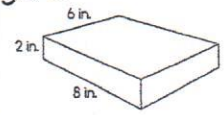
Day 1

April carries 5 suitcases to the car. Each suitcase weighs $6\frac{1}{3}$ pounds. How many pounds does April carry in all?

$4.696 - 0.232 =$

Bill planted 647 tulip bulbs in his flower garden. He had to plant the bulbs in rows of 20. How many rows was Bill able to plant? Write the answer as a mixed number.

It took 96 cubic in. cubes to fill this figure.



Find the volume of the figure by multiplying the side lengths. What do you notice?

Day 2

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

$\frac{5}{8} + \frac{2}{7} =$

Round 84.985 to the nearest tenth.

Write <, >, or = to make the statement true.

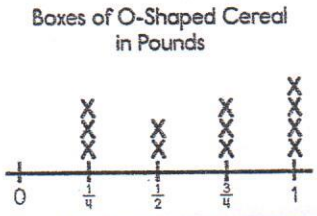
16.177 ◯ 16.117

Day 3

Leslie needs 48 ounces of charcoal for her grill. How many pounds of charcoal should she buy?

$(72 \div 9) \times 5 =$

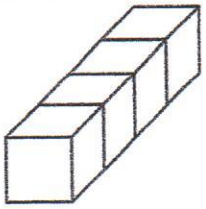
Nadia bought boxes of o-shaped cereal at the grocery store. The line plot below shows the different amounts of boxed cereal Nadia bought. How many pounds of o-shaped cereal did Nadia buy altogether?



Day 4

Find the volume of the figure by counting the unit cubes.

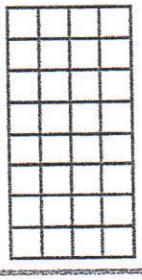
_____ cubic units



What is the value of 6 in the number 34.967?

$516 \div 6 =$

Shade the area on the grid that shows $\frac{5}{8} \times \frac{2}{4}$.



Name_____

Week #21 Assessment

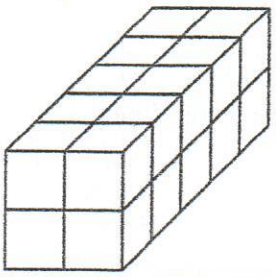
1. Chelsea's little brother packs 7 toys in his bag. If each toy weighs $1\frac{3}{4}$ ounces, how many ounces does his bag weigh?

2. $\frac{1}{6} \div 5 =$

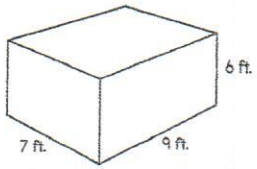
3. Brandon is making apple cider. If he makes 6 quarts, how many 1-cup servings can he pour?

4. Find the volume of the figure by counting the unit cubes.

_____ cubic units



5. It took 378 cubic ft. cubes to fill this figure.



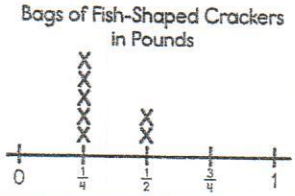
Find the volume of the figure by multiplying the side lengths. What do you notice?

6. $5.547 - 0.048 =$

7. $\frac{1}{10} + \frac{10}{12} =$

8. $719 \times 39 =$

9. Libby divided fish-shaped crackers into bags to sell at the snack sale. The line plot below shows the different amounts of fish-shaped crackers Libby bagged. How many pounds of fish-shaped crackers did Libby bag in all?



10. $25 \div (98 - 7) \times 4 =$

5.OA.1, 5.NBT.5, 5.NBT.7, 5.NF.1, 5.NF.6, 5.NF.7, 5.MD.1, 5.MD.2, 5.MD.4, 5.MD.5

1. Alex tiled some rectangles using square units. Sketch the rectangles if necessary. Fill in the missing information, and then confirm the area by multiplying.

Rectangle A:

I look at Rectangle A's dimensions, 4 units by $2\frac{1}{2}$ units.

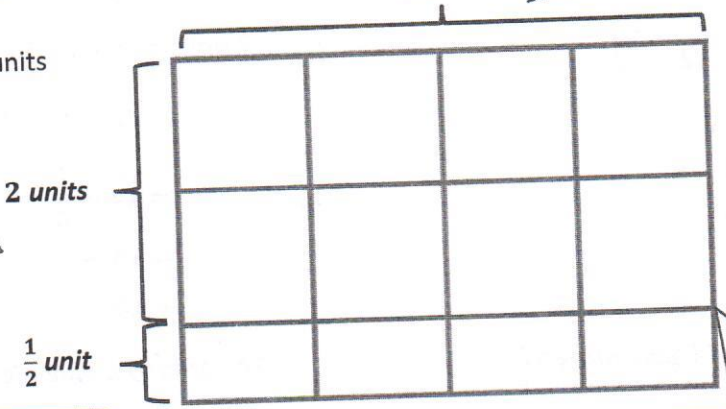
Rectangle A is

4 units long by $2\frac{1}{2}$ unit wide.

I can draw a length of 4 units.

Area = **10** square units

I can draw a rectangle and show a width of $2\frac{1}{2}$ units.



I can count the halves and see that there are 4 half square units, which is the same as 2 square units. I can multiply too.
4 units $\times \frac{1}{2}$ unit = 2 square units

I can count the squares and see that there are 8 whole square units. I can multiply too.
4 units × 2 units = 8 square units

8 square units + 2 square units = 10 square units

I can confirm the area by multiplying the length and width.

$4 \text{ units} \times 2\frac{1}{2} \text{ units}$

$(4 \times 2) + \left(4 \times \frac{1}{2}\right)$

$= 8 + \frac{4}{2}$

$= 8 + 2$

$= 10$

The area of Rectangle A is 10 square units.

I can use the rectangle I drew and the distributive property to help me multiply.
4 units × 2 units = 8 square units
4 units $\times \frac{1}{2}$ unit = $\frac{4}{2}$ square units = 2 square units

2. Juanita made a mosaic from different colored rectangular tiles. Two blue tiles measured $2\frac{1}{2}$ inches × 3 inches. Five white tiles measured 3 inches × $2\frac{1}{4}$ inches. What is the area of the whole mosaic in square inches?

I can find the area of one blue tile.

$$2\frac{1}{2}\text{ in} \times 3\text{ in}$$

$$(2 \times 3) + \left(\frac{1}{2} \times 3\right)$$

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

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

$$= 7\frac{1}{2}$$

The area of 1 blue tile is $7\frac{1}{2}\text{in}^2$.

To find the area of the two blue tiles, I can multiply the area by 2.

$$1\ \textit{unit} = 7\tfrac{1}{2}\ \text{in}^2$$

$$2\ \textit{units} = 2 \times 7\tfrac{1}{2}\ \text{in}^2$$

$$= (2 \times 7) + \left(2 \times \frac{1}{2}\right)$$

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

$$= 14 + 1$$

$$= 15$$

The area of 2 blue tiles is $15\ \text{in}^2$.

I can find the area of one white tile.

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

$$(3 \times 2) + \left(3 \times \frac{1}{4}\right)$$

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

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

The area of 1 white tile is $6\frac{3}{4}\ \text{in}^2$.

To find the area of five white tiles, I can multiply the area by 5.

$$1\ \textit{unit} = 6\tfrac{3}{4}\ \text{in}^2$$

$$5\ \textit{units} = 5 \times 6\tfrac{3}{4}\ \text{in}^2$$

$$= (5 \times 6) + \left(5 \times \frac{3}{4}\right)$$

$$= 30 + \frac{15}{4}$$

$$= 30 + 3\frac{3}{4}$$

$$= 33\frac{3}{4}$$

The area of 5 white tiles is $33\frac{3}{4}\ \text{in}^2$.

$$33\frac{3}{4}\text{in}^2 + 15\ \text{in}^2 = 48\frac{3}{4}\text{in}^2$$

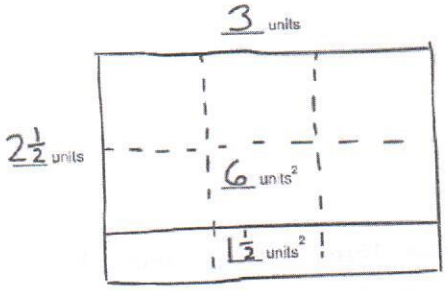
I can add the two areas together to find the area of the entire mosaic.

The area of the whole mosaic is $48\frac{3}{4}$ square inches.

Name _____ Date _____

1. John tiled some rectangles using square units. Sketch the rectangles if necessary. Fill in the missing information, and then confirm the area by multiplying.

a. **Rectangle A:**

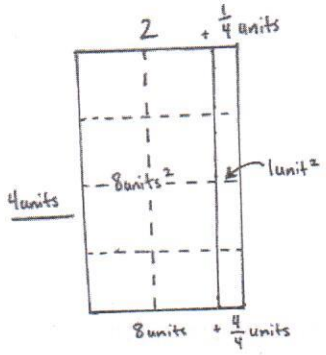


Rectangle A is

3 units long 2 1/2 units wide

Area = _____ units²

b. **Rectangle B:**



Rectangle B is

_____ units long _____ units wide

Area = _____ units²

c. **Rectangle C:**

Rectangle C is

3/4 units long 4 units wide

Area = _____ units²

d. **Rectangle D:**

Rectangle D is

2 units long $1\frac{3}{4}$ units wide

Area = _____ units^2

2. Rachel made a mosaic from different color rectangular tiles. Three tiles measured $3\frac{1}{2}$ inches × 3 inches. Six tiles measured 4 inches × $3\frac{1}{4}$ inches. What is the area of the whole mosaic in square inches?

3. A garden box has a perimeter of $27\frac{1}{2}$ feet. If the length is 9 feet, what is the area of the garden box?

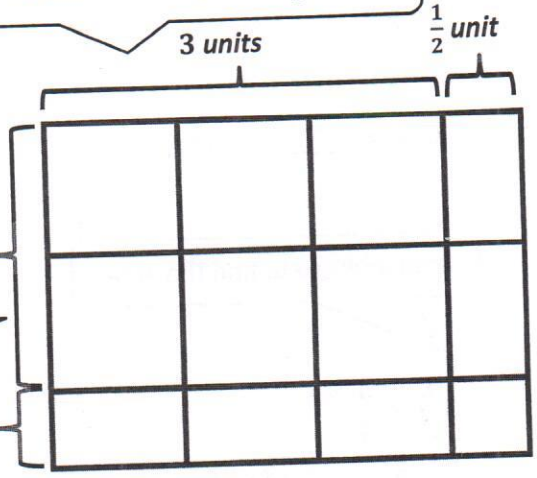
1. Cindy tiled the following rectangles using square units. Sketch the rectangles, and find the areas. Then, confirm the area by multiplying.

   a. **Rectangle A:**

I look at Rectangle A's dimensions, $3\frac{1}{2}$ units by $2\frac{1}{2}$ units.

Rectangle A is $3\frac{1}{2}$ units long by $2\frac{1}{2}$ units wide.

I can draw a length of $3\frac{1}{2}$ units.



Area = $8\frac{3}{4}$ units^2

I draw a width of $2\frac{1}{2}$ units.

$$3\frac{1}{2} \times 2\frac{1}{2}$$
$$= (2 \times 3) + \left(2 \times \frac{1}{2}\right) + \left(\frac{1}{2} \times 3\right) + \left(\frac{1}{2} \times \frac{1}{2}\right)$$
$$= 6 + \frac{2}{2} + \frac{3}{2} + \frac{1}{4}$$
$$= 6 + 1 + 1\frac{1}{2} + \frac{1}{4}$$
$$= 6 + 1 + 1\frac{2}{4} + \frac{1}{4}$$
$$= 8\frac{3}{4}$$

I can look at the rectangle above to help me multiply.

2 units × 3 units = 6 units^2

2 units × $\frac{1}{2}$ unit = $\frac{2}{2}$ unit^2 = 1 unit^2

$\frac{1}{2}$ unit × 3 units = $\frac{3}{2}$ units^2 = $1\frac{1}{2}$ units^2

$\frac{1}{2}$ unit × $\frac{1}{2}$ unit = $\frac{1}{4}$ unit^2

I rename $1\frac{1}{2}$ as $1\frac{2}{4}$ so I can add.

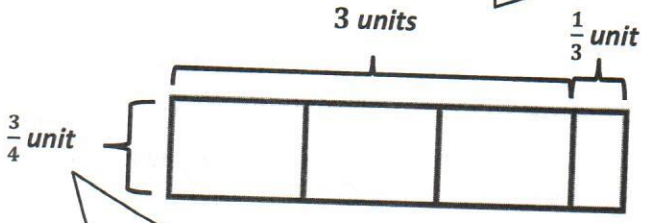
The area of Rectangle A is $8\frac{3}{4}$ square units.

b. **Rectangle B:**

Rectangle B is $3\frac{1}{3}$ units long by $\frac{3}{4}$ unit wide.

Area = $2\frac{1}{2}$ units^2

I draw a length of $3\frac{1}{3}$ units.



I draw and label the width as $\frac{3}{4}$ unit.

I can multiply to find the area.

$$3\frac{1}{3} \times \frac{3}{4}$$
$$= \left(\frac{3}{4} \times 3\right) + \left(\frac{3}{4} \times \frac{1}{3}\right)$$
$$= \frac{9}{4} + \frac{3}{12}$$
$$= 2\frac{1}{4} + \frac{1}{4}$$
$$= 2\frac{2}{4}$$
$$= 2\frac{1}{2}$$

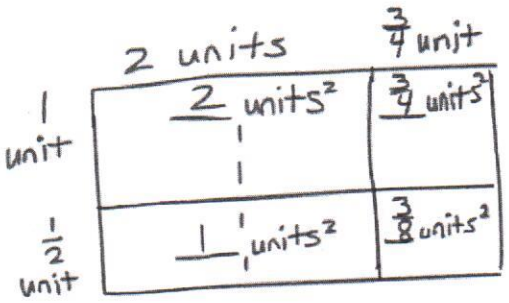
I can look at the rectangle above to help me multiply.
$\frac{3}{4}$ unit × 3 units = $\frac{9}{4}$ unit^2 = $2\frac{1}{4}$ unit^2
$\frac{3}{4}$ unit × $\frac{1}{3}$ unit = $\frac{3}{12}$ unit^2 = $\frac{1}{4}$ unit^2

The area of Rectangle B is $2\frac{1}{2}$ square units.

Name _____ Date _____

1. Kristen tiled the following rectangles using square units. Sketch the rectangles, and find the areas. Then, confirm the area by multiplying. Rectangle A has been sketched for you.

a. **Rectangle A:**



Rectangle A is

_____ units long × _____ units wide

Area = _____ units²

b. **Rectangle B:**

Rectangle B is

$2\frac{1}{2}$ units long × $\frac{3}{4}$ unit wide

Area = _____ units²

c. **Rectangle C:**

Rectangle C is

$3\frac{1}{3}$ units long × $2\frac{1}{2}$ units wide

Area = _____ units²

d. **Rectangle D:**

Rectangle D is

$3\frac{1}{2}$ units long $\times$ $2\frac{1}{4}$ units wide

Area = _____ units^2

2. A square has a perimeter of 25 inches. What is the area of the square?

1. What are polygons with four sides called?

   Quadrilaterals

I know that the prefix "quad" means "four."

2. What are the attributes of trapezoids?

   - ***They are quadrilaterals.***

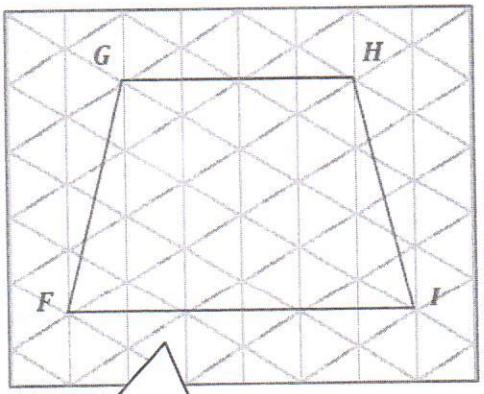
I know that some trapezoids with more specific attributes are commonly known as parallelograms, rectangles, squares, rhombuses, and kites. But *ALL* trapezoids are quadrilaterals with at least one set of opposite sides parallel.

   - ***They have at least one set of opposite sides parallel.***

I know that some trapezoids have only right angles (90°), some have two acute angles (less than 90°) and two obtuse angles (more than 90° but less than 180°), and some have a combination of right, acute, and obtuse angles.

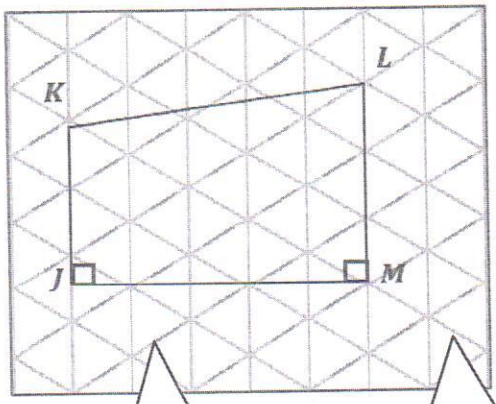
3. Use a straightedge and the grid paper to draw

   a. A trapezoid with 2 sides of equal length.



Since this trapezoid has 2 sides of equal length ($\overline{FG}$ and $\overline{HI}$), it is called an isosceles trapezoid.

   b. A trapezoid with no sides of equal length.



$\angle J$ and $\angle M$ are right angles and measure 90°.

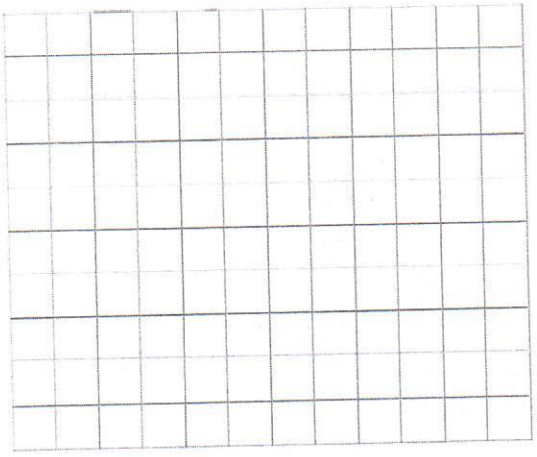
In this trapezoid, none of the sides are equal in length.

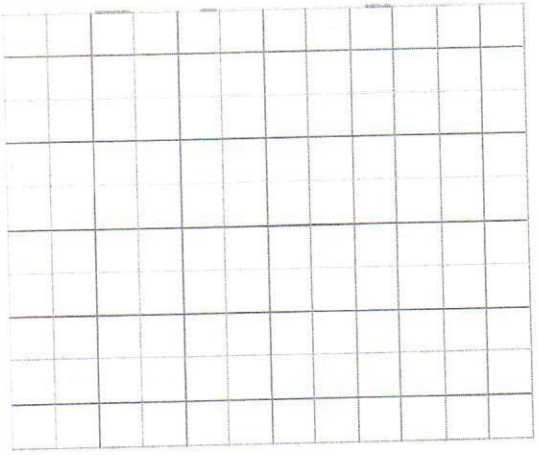
Name _____ Date _____

1. Use a straightedge and the grid paper to draw:

   a. A trapezoid with exactly 2 right angles.

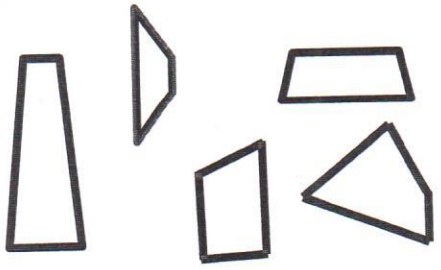
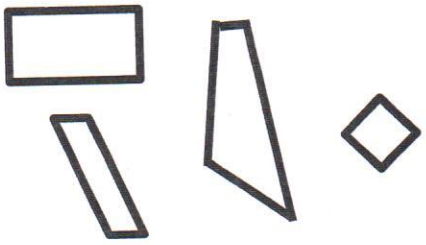
   b. A trapezoid with no right angles.





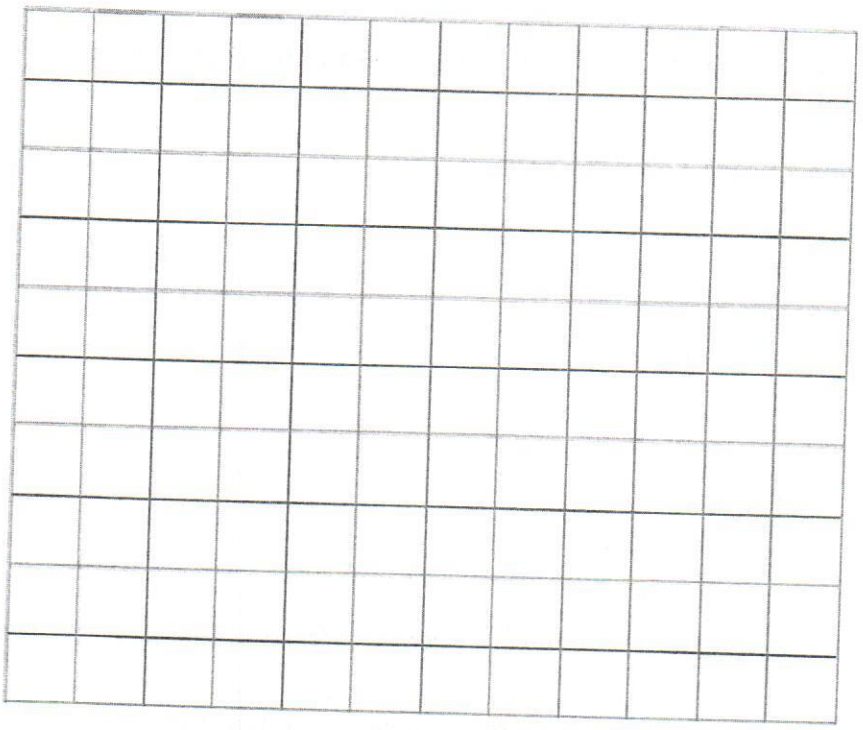
2. Kaplan incorrectly sorted some quadrilaterals into trapezoids and non-trapezoids as pictured below.

   a. Circle the shapes that are in the wrong group, and tell why they are sorted incorrectly.

Trapezoids	Non-Trapezoids
	

   b. Explain what tools would be necessary to use to verify the placement of all the trapezoids.

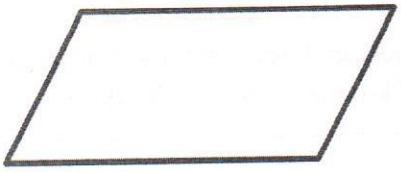
3. a. Use a straightedge to draw an isosceles trapezoid on the grid paper.



b. Why is this shape called an isosceles trapezoid?

1. Circle all of the words that could be used to name the figure below.

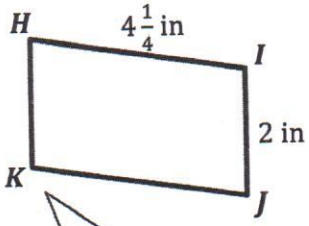
parallelogram triangle quadrilateral trapezoid square



This figure is a parallelogram because it's a quadrilateral with both pairs of opposite sides parallel.

This figure is a trapezoid because it's a quadrilateral with at least one pair of opposite sides parallel.

2. $HIJK$ is a parallelogram not drawn to scale.



This is $\angle HKJ$.

a. Using what you know about parallelograms, give the lengths of $\overline{KJ}$ and $\overline{HK}$.

$KJ =$ **$4\frac{1}{4}$ in** $HK =$ **2 in**

I know that opposite sides of a parallelogram are equal in length. $HI = KJ$.

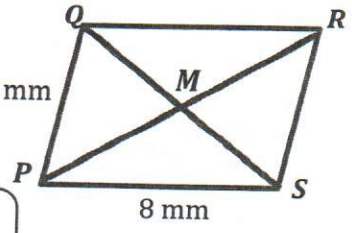
b. $\angle HKJ = 99°$. Use what you know about angles in a parallelogram to find the measure of the other angles.

I know that opposite angles of a parallelograms are equal in measure.

$\angle IHK =$ **81** ° $\angle JIH =$ **99** ° $\angle KJI =$ **81** °

I know that angles that are next to one another, or adjacent, add up to 180°.
$180° - 99° = 81°$

3. $PQRS$ is a parallelogram not drawn to scale. $PR = 10$ mm and $MS = 4.5$ mm. Give the lengths of the following segments:

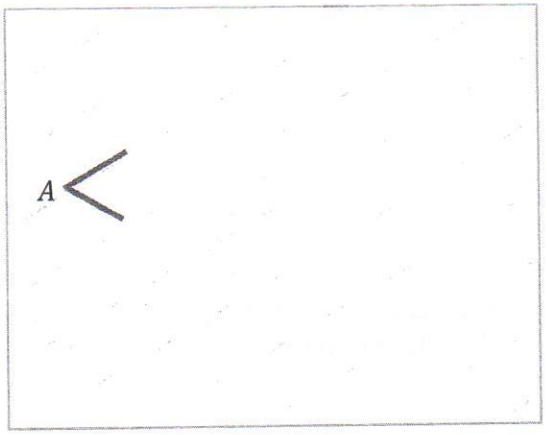


$PM =$ **5 mm** $QS =$ **9 mm**

I know that the diagonals of a parallelogram bisect, or cut one another in two equal parts. So the length of $\overline{PM}$ is equal to half the length of $\overline{PR}$.

Name _____ Date _____

1. $\angle A$ measures 60°.



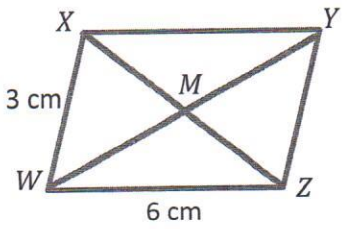
   a. Extend the rays of $\angle A$, and draw parallelogram $ABCD$ on the grid paper.

   b. What are the measures of $\angle B$, $\angle C$, and $\angle D$?

2. $WXYZ$ is a parallelogram not drawn to scale.

   a. Using what you know about parallelograms, give the measure of sides XY and YZ.

   b. $\angle WXY = 113°$. Use what you know about angles in a parallelogram to find the measure of the other angles.



$\angle XYZ =$ _____° $\angle YZW =$ _____° $\angle ZWX =$ _____°

3. Jack measured some segments in Problem 2. He found that $\overline{WY}$ = 8 cm and $\overline{MZ}$ = 3 cm.

   Give the lengths of the following segments:

$WM =$ _____ cm $MY =$ _____ cm

$XM =$ _____ cm $XZ =$ _____ cm

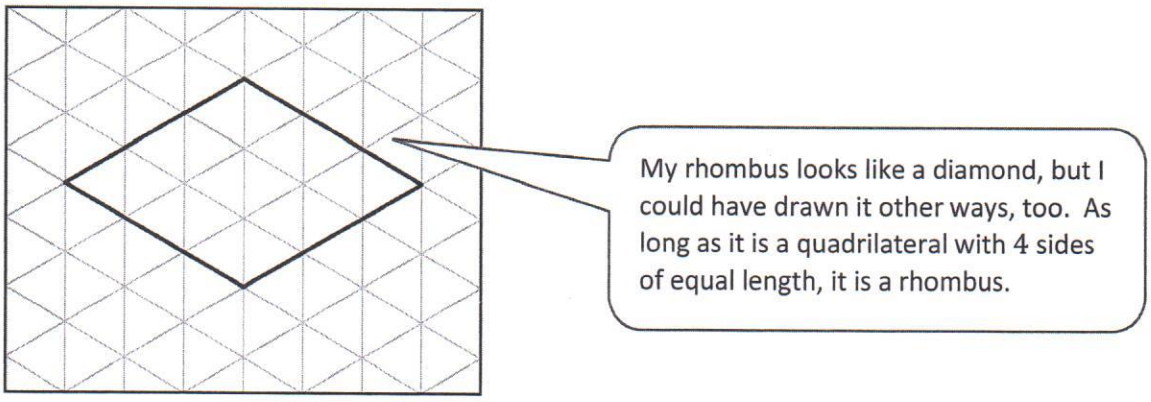
4. Using the properties of shapes, explain why all parallelograms are trapezoids.

5. Teresa says that because the diagonals of a parallelogram bisect each other, if one diagonal is 4.2 cm, the other diagonal must be half that length. Use words and pictures to explain Teresa's error.

1. What is the definition of a rhombus? Draw an example.

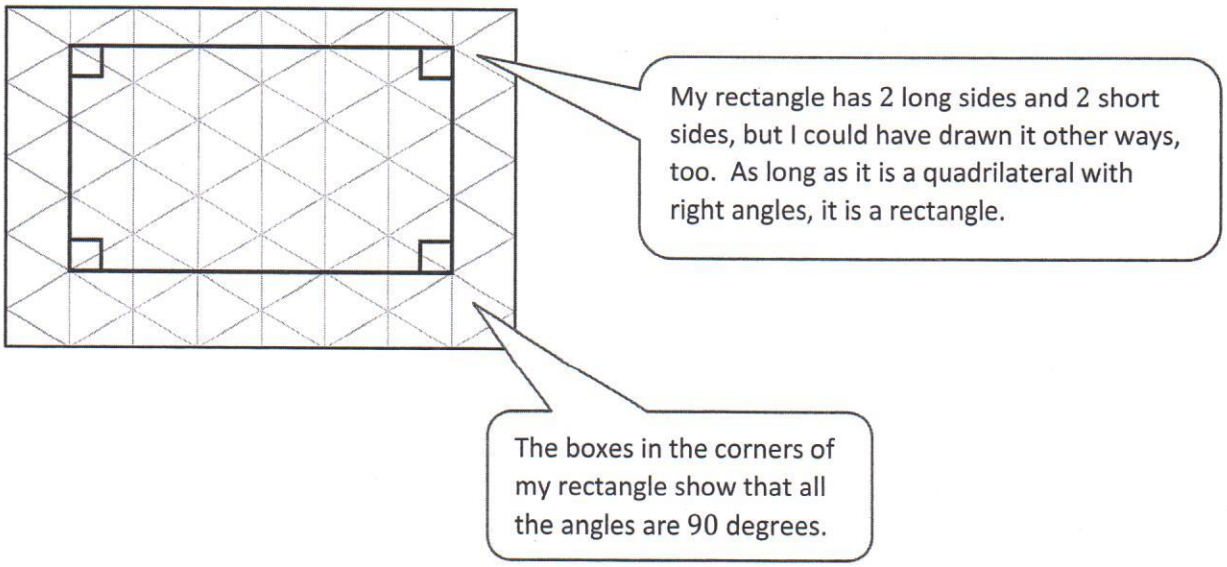
A rhombus is a quadrilateral (a shape with 4 sides) with all sides equal in length.

One example of a rhombus looks like this:



2. What is the definition of a rectangle? Draw an example.

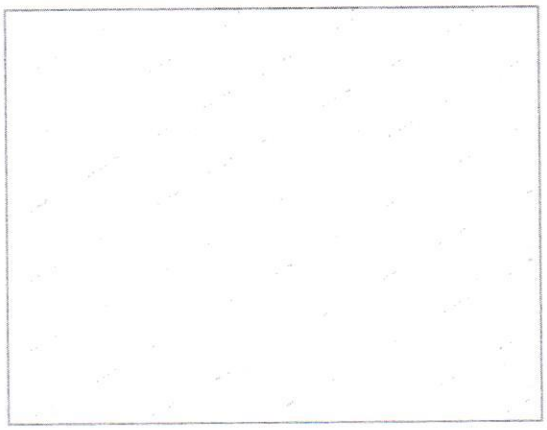
A rectangle is a quadrilateral with four right (90 degree) angles.



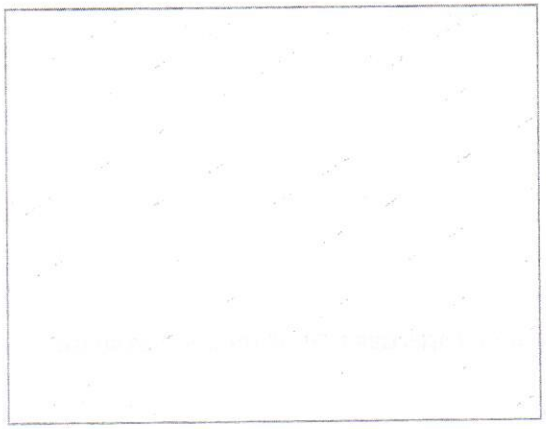
Name _____ Date _____

1. Use the grid paper to draw.

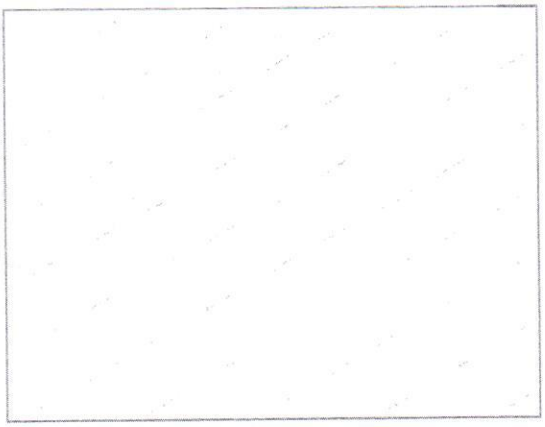
a. A rhombus with no right angles



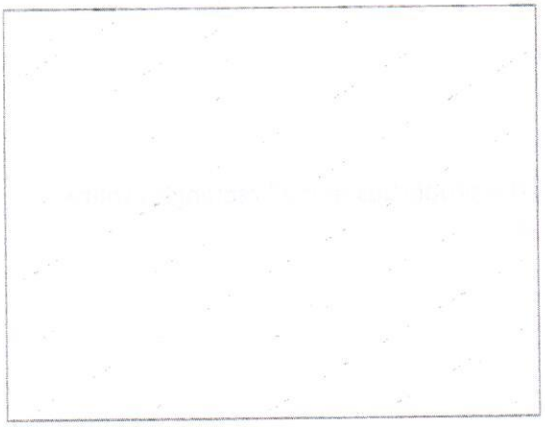
b. A rhombus with 4 right angles



c. A rectangle with not all sides equal



d. A rectangle with all sides equal



2. A rhombus has a perimeter of 217 cm. What is the length of each side of the rhombus?

3. List the properties that all rhombuses share.

4. List the properties that all rectangles share.

1. Answer the following questions using number line P, below.

The origin is always zero.

a. What is the coordinate, or the distance from the origin, of the ⬟ ?

20

The coordinate tells the distance from the zero to the shape on the number line.

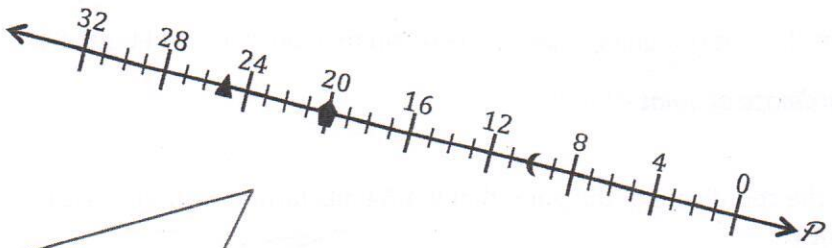
b. What is the coordinate of ▲ ?

25

c. What is the coordinate at the midpoint between ☾ and ⬟ ?

15

The distance from the moon to the pentagon is 10 units, so the midpoint will be 5 units from each shape.



This number line increases from right to left. Number lines can go in any direction.

2. Use the number line to answer the questions.

a. Plot P so its distance is $\frac{2}{10}$ from the origin.

The first tick mark is 0, and the second is 0.4. The distance between tick marks is 0.4, or $\frac{4}{10}$.

b. Plot Q 12 tenths farther from the origin than point P.

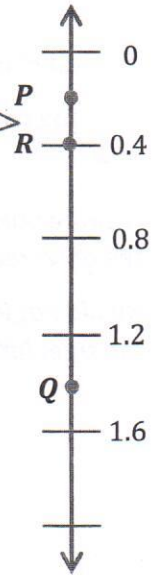
c. Plot R so its distance is 1 closer to the origin than point Q.

12 tenths more than 2 tenths is 14 tenths, or 1.4.

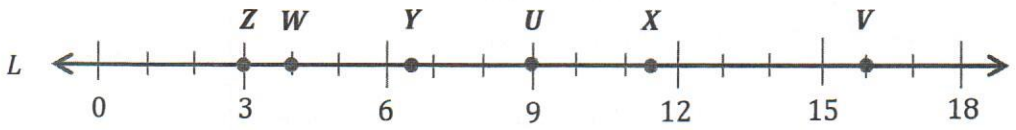
d. What is the distance from P to R?

I can think of 1 as 10 tenths.

***The distance from P to R is* 0.2.**



3. Number line L shows 18 units. Use number line L, below, to answer the questions.



a. Plot a point at 3. Label it Z.

The units are one, and they are indicated by the tick marks on the number line.

b. Label point Y at $6\frac{1}{2}$.

c. Plot a point X that is 5 units farther from zero than point Y.

"Closer to the origin" means I have to move to the left along this number line.

d. Plot point W that is $\frac{5}{2}$ units closer to the origin than point Y. What is the coordinate of point W?

The coordinate of point W is 4.

e. What is the coordinate of the point that is 4.5 units farther from the origin than point X? Label this point V.

The coordinate of point V is 16.

$11\frac{1}{2} + 4\frac{1}{2} = 16$

f. Label point U midway between point Y and point X. What is the coordinate of this point?

The coordinate midway between points Y and X is 9.

4. A pirate buried stolen treasure in a vacant lot. He made a note that he buried the treasure 15 feet from the only tree on the lot. Later he could not find the treasure. What did he do wrong?

He did not indicate what direction from the tree he buried the treasure. If he just says fifteen feet from the tree, he'd have to dig a circle around the tree to find the treasure.

Name _____ Date _____

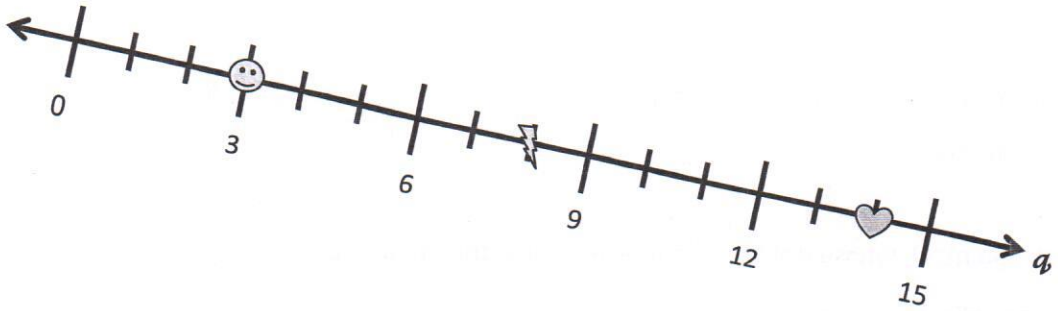
1. Answer the following questions using number line q below.

   a. What is the coordinate, or the distance from the origin, of the  ? _____

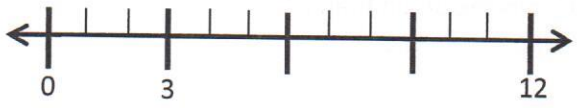
   b. What is the coordinate of the  ? _____

   c. What is the coordinate of the  ? _____

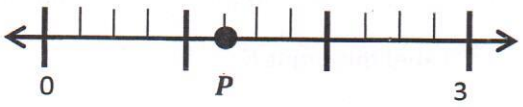
   d. What is the coordinate at the midpoint of the  and the  ? _____



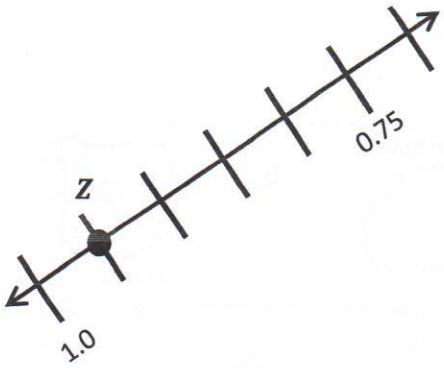
2. Use the number lines to answer the questions.



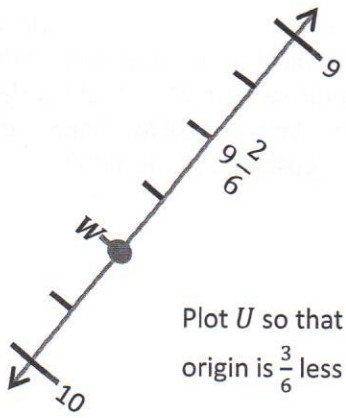
Plot T so that its distance from the origin is 10.



Plot M so that its distance is $\frac{11}{4}$ from the origin. What is the distance from P to M?

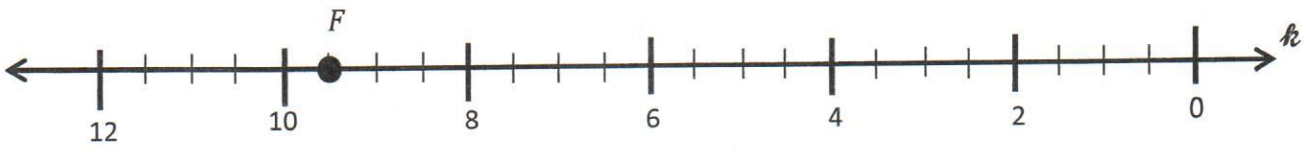


Plot a point that is 0.15 closer to the origin than Z.



Plot U so that its distance from the origin is $\frac{3}{6}$ less than that of W.

3. Number line $\mathscr{h}$ shows 12 units. Use number line $\mathscr{h}$ below to answer the questions.



a. Plot a point at 1. Label it A.

b. Label a point that lies at $3\frac{1}{2}$ as B.

c. Label a point, C, whose distance from zero is 8 units farther than that of B.

The coordinate of C is _____.

d. Plot a point, D, whose distance from zero is $\frac{6}{2}$ less than that of B.

The coordinate of D is _____.

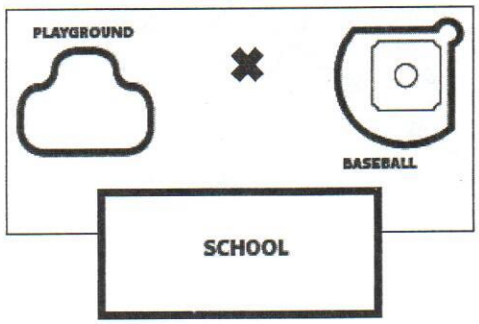
e. What is the coordinate of the point that lies $\frac{17}{2}$ farther from the origin than D?

Label this point E.

f. What is the coordinate of the point that lies halfway between F and D?

Label this point G.

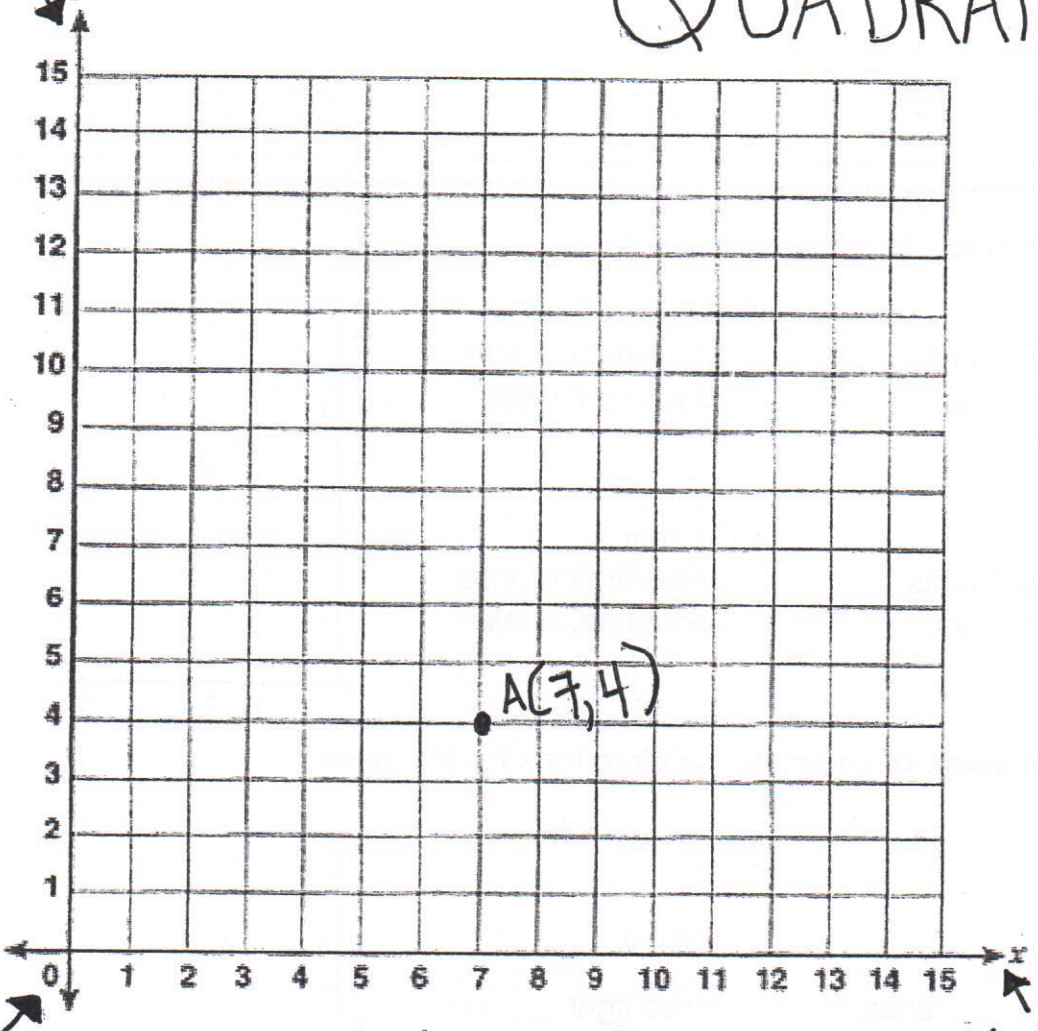
4. Mr. Baker's fifth-grade class buried a time capsule in the field behind the school. They drew a map and marked the location of the capsule with an ✖ so that his class can dig it up in ten years. What could Mr. Baker's class have done to make the capsule easier to find?



COORDINATE GRID

y-axis (vertical number line)

QUADRANT 1



Origin (Starting Point) (0,0)

Ordered Pair (x-coordinate, y-coordinate)

↓ move along the x-axis

↓ move along the y-axis

x-axis (horizontal number line)

Name _____ Date _____

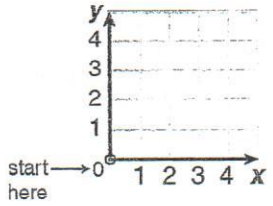
Reteach 24.1

Locate Points on a Grid

Locate the point on the graph for the ordered pair (3, 2).

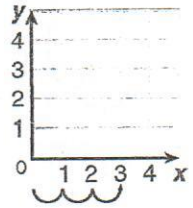
Step 1

Start at 0.



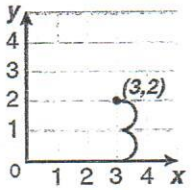
Step 2

Move 3 units to the right.



Step 3

Move 2 units up.



Use the graph below to name each point.

1. Start at 0.
   Move right 6 units.
   Move up 7 units.

   _____

2. Start at 0.
   Move right 3 units.
   Move up 5 units.

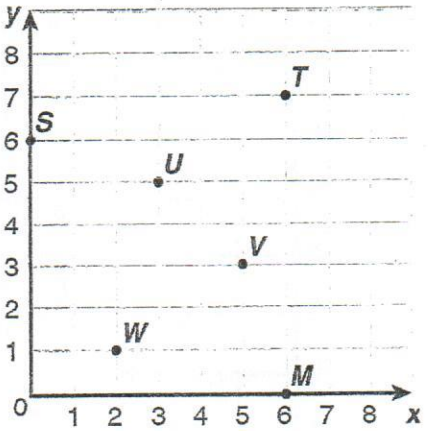
   _____

3. Start at 0.
   Move right 5 units.
   Move up 3 units.

   _____

4. Start at 0.
   Move right 0 units.
   Move up 6 units.

   _____



Use the graph below to complete the directions for the given points.

5. *R*

   Start at ____.

   Move right ____ units.

   Move up ____ units.

6. *Q*

   Start at ____.

   Move right ____ units.

   Move up ____ units.

7. *Z*

   Start at ____.

   Move right ____ units.

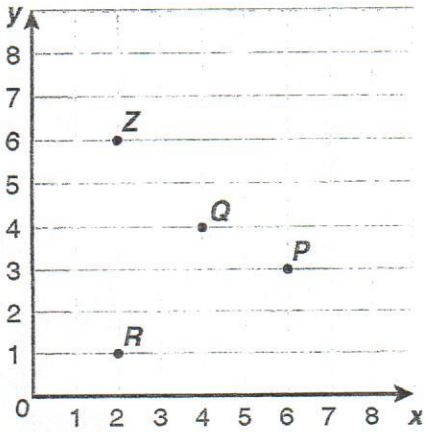
   Move up ____ units.

8. *P*

   Start at ____.

   Move right ____ units.

   Move up ____ units.

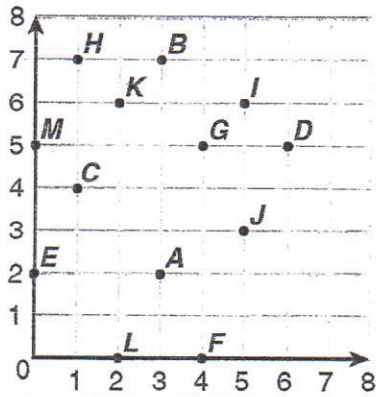


Name _____ Date _____

Practice 24.1

Locate Points on a Grid

Use the graph on the right for Exercises 1–18. Write the letter of the point for each ordered pair.



1. (2, 6) _____

2. (3, 2) _____

3. (1, 4) _____

4. (5, 3) _____

5. (6, 5) _____

6. (2, 0) _____

Write the ordered pair for each point.

7. *B* _____

8. *F* _____

9. *I* _____

10. *E* _____

11. *M* _____

12. *H* _____

13. Which coordinates of *H* and *B* are the same?

_____

14. Name the ordered pairs for *M*, *G*, and *F*. What do *M* and *F* have in common?

_____

15. Write directions explaining how to go from 0 to *L* and then from *L* to *K*.

_____

16. Name three pairs of points where both points in the pair have the same first coordinate.

_____

Test Prep

17. Write the letter of the point which matches the ordered pair (4, 5).

_____

18. Write directions for locating a point whose coordinates are (4, 10).

_____

Name _____ Date _____

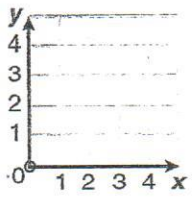
Reteach 24.2

Algebra: Graph Ordered Pairs

Plot the point named by (2, 3). Label the point W.

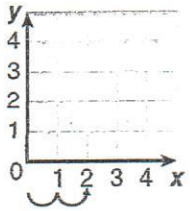
Step 1

Start at 0.



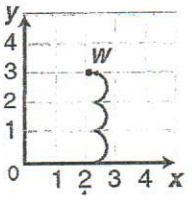
Step 2

The first number in the ordered pair tells you to move 2 units to the right.



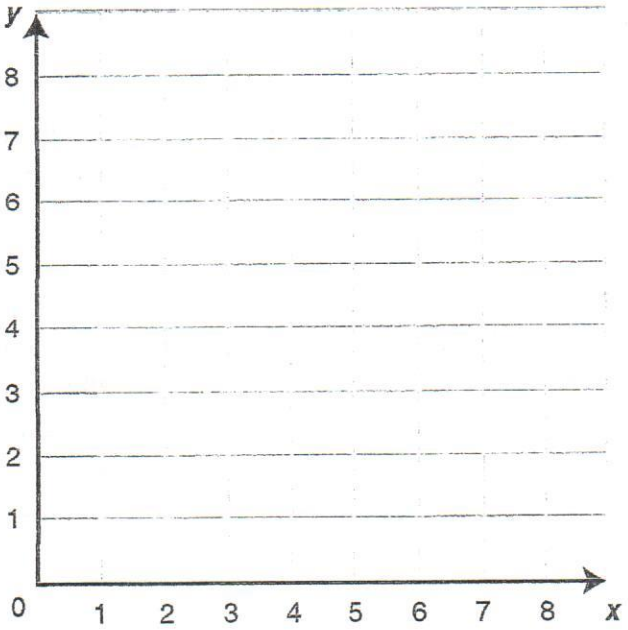
Step 3

The second number in the ordered pair tells you to move 3 units up. Make a dot and label it *W*.



Plot each point and label it with the correct letter.

1. *A* (3, 4)
2. *B* (5, 2)
3. *C* (6, 7)
4. *D* (2, 2)
5. *E* (8, 7)
6. *F* (4, 0)
7. *G* (4, 6)
8. *H* (0, 3)
9. *I* (3, 8)
10. *J* (5, 5)



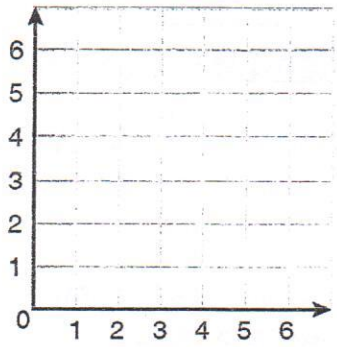
Name _____ Date _____

Practice 24.2

Algebra: Graph Ordered Pairs

Plot each point and label it with the correct letter.

1. A (3, 5)
2. B (1, 6)
3. C (5, 6)
4. D (2, 4)
5. E (2, 0)
6. F (4, 2)
7. G (3, 1)
8. H (0, 4)
9. I (2, 6)
10. J (1, 5)

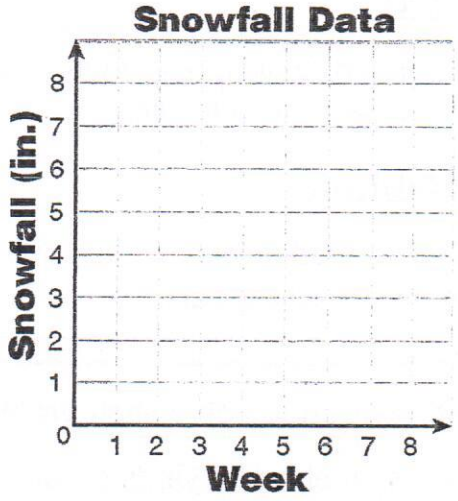


Use the grid for problems 11–13.

11. Sally collected snowfall data for an experiment. She wants to make a line graph of her data, which is shown below in the table.

    a. Rewrite the data as ordered pairs, using the week as the first coordinate and the inches of snowfall as the second coordinate.

    b. Plot and connect the points to make a line graph on the grid on the right.



Snowfall Data								
Week	1	2	3	4	5	6	7	8
Snowfall (in.)	3	7	1	0	8	4	6	2

Test Prep

12. Suppose that you were to start at 0, then move 3 units to the right, then move 6 units up, and then make a dot. Which ordered pair matches the dot?

    A (6, 3) **C** (3, 6)

    B (0, 6) **D** (3, 0)

13. Patrick plotted a point at (5, 4). He started at 0, moved up 5 units and then moved right 4 units. Explain what Patrick did wrong.

_____

Name _____ Date _____

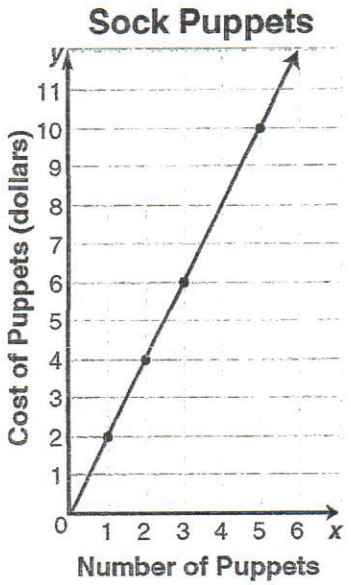
Reteach 24.5

Problem-Solving Application: Use a Graph

Read It Look for information.

Students are making sock puppets. They need to know how much it will cost to make 5 sock puppets.

You can use the graph to find the cost of making 5 puppets.



Plan

Start at 0. Move 5 units to the right. Move up to meet the line.

Solution

The ordered pair is (5, 10). It will cost $10 to make 5 sock puppets.

Use the graph to solve each problem.

1. How much will 2 yards of ribbon cost?

   Think: Start at 0. Move 2 units to the right. Then go up to meet the line.

   _____

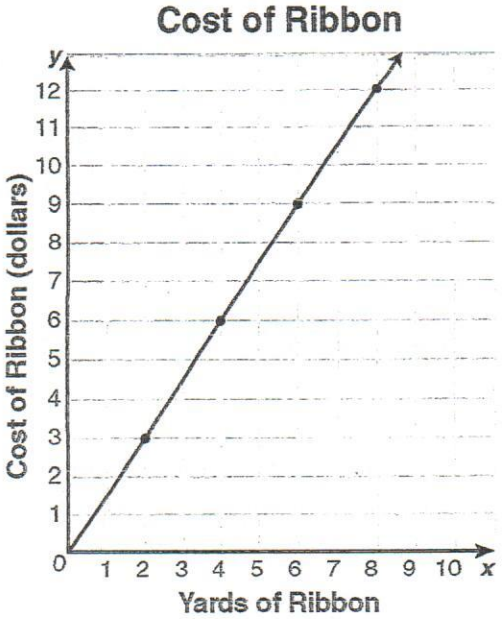
2. How much more will 8 yards of ribbon cost than 4 yards of ribbon?

   Think: What are the costs for 8 yards and 4 yards of ribbon?

   _____

3. Jim has $5.00 to spend for ribbon. How many complete yards of ribbon can he buy?

   _____

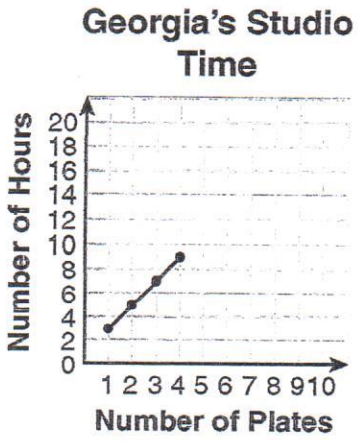


Name _____ Date _____

Practice 24.5

Problem-Solving Application: Use a Graph

Georgia works every day at her ceramics studio. Each day, after taking time to set up her studio, she makes plates. The graph shows the relationship between the number of plates she completes and the number of hours Georgia works in her studio. Use the graph for Problems 1–5.



1. How many hours will it take Georgia to complete 3 plates?

_____

2. How much more time will it take her to complete 5 plates than 2 plates?

_____

3. Georgia spent 6 hours at her studio. She sells all the plates that she completed in that time. If she sells each plate for $20, how much money does she make?

Show your work.

_____

4. Georgia spent 9 hours working in her studio each day for 5 days. How many plates did she complete?

_____

5. If you extend the line, will the point (8, 17) be on it?

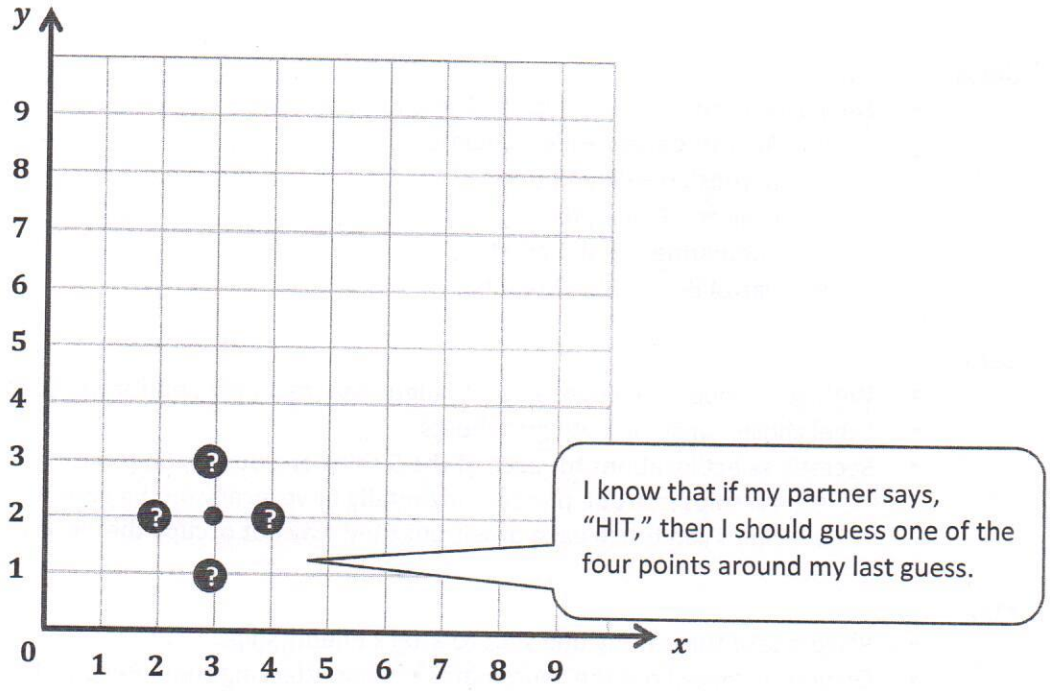
_____

Lesson Notes

The rules for playing *Battleship*, a popular game, are at the end of this Homework Helper.

1. While playing *Battleship*, your friend says, "Hit!" when you guess point $(3, 2)$. How do you decide which points to guess next?

   If I get a hit at point $(3, 2)$***, then I know I should try to guess one of the four points around*** $(3, 2)$ ***because the ship has to lie either vertically or horizontally according to the rules. I would guess one of these points:*** $(2, 2)$, $(3, 1)$, $(4, 2)$, ***or*** $(3, 3)$.



2. What changes to the game could make it more challenging?

   The game is easiest when I count by ones on the coordinate grid's axes. If I changed the axes to count by another number like 7's or 9's on each grid line, the game would be more challenging. It would also be more challenging if I skip-count on the axes by fractions such as $\frac{1}{2}$ ***or*** $2\frac{1}{2}$.

Battleship Rules

Goal: To sink all of your opponent's ships by correctly guessing their coordinates.

Materials

- 1 My Ships grid sheet (per person/per game)
- 1 Enemy Ships grid sheet (per person/per game)
- Red crayon/marker for hits
- Black crayon/marker for misses
- Folder to place between players

Ships

- Each player must mark 5 ships on the grid.
  - Aircraft Carrier—Plot 5 points
  - Battleship—Plot 4 points
  - Cruiser—Plot 3 points
  - Submarine—Plot 3 points
  - Patrol Boat—Plot 2 points

Setup

- With your opponent, choose a unit length and fractional unit for the coordinate plane.
- Label chosen units on both grid sheets.
- Secretly select locations for each of the 5 ships on your My Ships grid.
  - All ships must be placed horizontally or vertically on the coordinate plane.
  - Ships can touch each other, but they may not occupy the same coordinate.

Play

- Players take turns firing one shot to attack enemy ships.
- On your turn, call out the coordinates of your attacking shot. Record the coordinates of each attack shot.
- Your opponent checks his My Ships grid. If that coordinate is unoccupied, your opponent says, "Miss." If you named a coordinate occupied by a ship, your opponent says, "Hit."
- Mark each attempted shot on your Enemy Ships grid. Mark a black ✖ on the coordinate if your opponent says, "Miss." Mark a red ✓ on the coordinate if your opponent says, "Hit."
- On your opponent's turn, if he hits one of your ships, mark a red ✓on that coordinate of your My Ships grid. When one of your ships has every coordinate marked with a ✓, say, "You've sunk my [name of ship]."

Victory

- The first player to sink all (or the most) opposing ships wins.

Name _____ Date _____

Your homework is to play at least one game of Battleship with a friend or family member. You can use the directions from class to teach your opponent. You and your opponent should record your guesses, hits, and misses on the sheet as you did in class.

When you have finished your game, answer these questions.

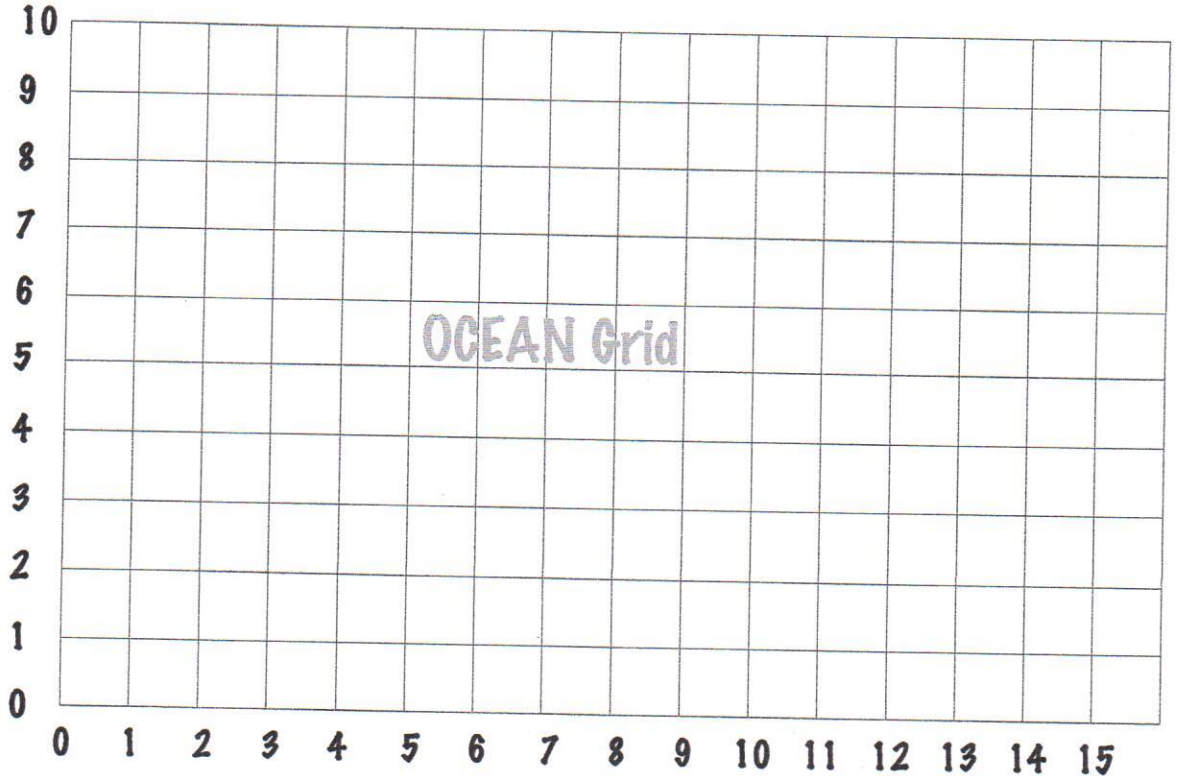
1. When you guess a point that is a hit, how do you decide which points to guess next?

2. How could you change the coordinate plane to make the game easier or more challenging?

3. Which strategies worked best for you when playing this game?

BATTLESHIP


10
9
8
7
6
5
4
3
2
1
0
TARGET Grid
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15


10
9
8
7
6
5
4
3
2
1
0
OCEAN Grid
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15