

LETTER HOME

Location and Shapes

Dear Family Member:

In this unit, students learn to describe the location of objects as a direction and distance from an origin. Students will also be introduced to negative numbers using temperature, depth, and as a way to describe a distance from an origin. This coordinate system is used to locate points on a graph, find places on a map, and even show images on a video screen.

Students will explore this last example as they plot shapes on a coordinate grid. Students will then use the coordinates of a shape to describe the properties of a shape. For example, which set of coordinates will make a square?

As students describe the shapes they are plotting, students are preparing to use reasoning to classify shapes. For example, a square can be classified as a parallelogram but not as a trapezoid.

There are many opportunities to assist your child at home with the concepts in this unit:

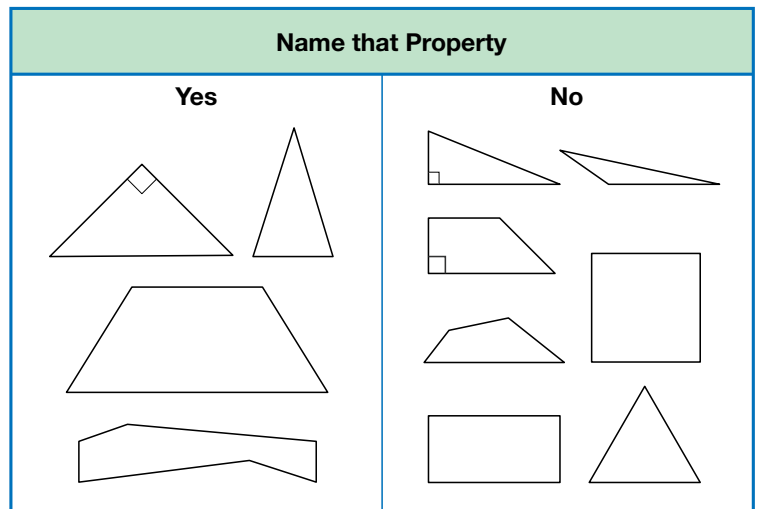


Figure 1: Shapes sorted for the rule, “one pair of congruent sides”

- **Find Examples of Negative Numbers.** Ask your child to search for examples of negative numbers in real-life situations: the temperature on a sign or on a thermometer, the location to the left or below an origin on a map (latitude and longitude), the balance in a financial report.
- **Use Coordinates.** While traveling, locate destinations using coordinates found on the edges of a map.
- **Describe Shapes.** Help your child by asking him or her to identify shapes at home and to discuss the parts of common geometric shapes. Talking about the number of sides and vertices (corners) of various shapes is worthwhile. You might also want have your child look for examples of right angles and then angles that are more or less than a right angle.
- **Play Shape Finder.** Name a property of a shape and try to identify and draw several shapes with that property. For example, if a property is a shape with one pair of congruent sides your child may draw shapes like these in the first column of Figure 1.
- **Play Name that Property.** Collect examples of polygons. Draw a two-column table and label one “Yes” and other “No”. One player chooses a property and sorts the shapes according to that property. The other player tries to name the property by adding a shape to the “Yes” column that matches the property. If they are correct, players switch roles. See Figure 1.

Math Facts and Mental Math

This unit continues the systematic review and assessment of the multiplication and division facts.

Multiplication Facts. Students review the multiplication facts for the last six facts (4×6 , 4×7 , 4×8 , 6×7 , 6×8 , 7×8) to maintain and increase fluency and to learn to apply multiplication strategies to larger numbers.

You can help your child review these facts using the flash cards that are sent home or by making a set of flash cards from index cards or scrap paper. Study facts in small groups each night and focus only on those facts that your child needs to learn. As your child goes through the flash cards, put the cards in three stacks: Facts I Know Quickly, Facts I Can Figure Out, and Facts I Need to Learn.

For Facts I Need to Learn, work on strategies for figuring them out. If there are many multiplication facts that your child still needs to learn, divide them into smaller groups of facts. Choose groups of facts that lend themselves to the use of the same strategy and focus on one group at a time.

For Facts I can Figure Out, use the flash cards to practice the facts for fluency.

For Facts I Know Quickly, help your child use mental math strategies to multiply 10s and 100s. You can also help your child extend and deepen understanding by asking him or her to choose a multiplication fact that was difficult to learn and describe strategies used for learning the fact.

Division Facts. Students review the division facts for the last six facts (4×6 , 4×7 , 4×8 , 6×7 , 6×8 , 7×8) to maintain and increase fluency and to learn and apply multiplication and division strategies to larger numbers.

You can help your child review these facts using the flash cards that are sent home or by making a set of flash cards from index cards or scrap paper. Study facts in small groups each night. As your child goes through the flash cards, put the cards into three stacks: Facts I Know Quickly, Facts I Can Figure Out, and Facts I Need to Learn.

For the Facts I Need to Learn, work on strategies for figuring them out. Good strategies include:

Turn-around facts. To solve $42 \div 6$: I know $6 \times 7 = 42$, so $42 \div 6 = 7$.

Reasoning from known facts. To solve $28 \div 4$: I know $28 \div 2 = 14$ so $28 \div 4$ is half of 14 or 7.

For Facts I Can Figure Out, use the flash cards to practice the facts for fluency.

For Facts I Know Quickly, help your child use mental math strategies to divide 10s and 100s:

$$320 \div 40 = 8; 4200 \div 700 = 6$$

Thank you for taking time to talk with your child about what he or she is learning in math.

Sincerely,

Unit 6: Home Practice

Part 1 Triangle Flash Cards: Last Six Facts

Study for the quiz on the multiplication and division facts for the last six facts. Take home your *Triangle Flash Cards: Last Six Facts* (4×6 , 4×7 , 4×8 , 6×7 , 6×8 , and 7×8) and your list of facts you need to study.

Ask a family member to choose one flash card at a time. To quiz you on a multiplication fact, he or she should cover the corner containing the highest number. (The highest number on each card is slightly shaded.) This number will be the answer to the multiplication fact. Multiply the two uncovered numbers.

To quiz you on a division fact, your family member can cover one of the unshaded numbers. Then use the two uncovered numbers to solve a division fact.

Ask your family member to mix up the multiplication and division facts. He or she should sometimes cover the highest number and sometimes cover one of the smaller numbers.

Your teacher will tell you when the quiz on the last six facts will be.

Part 2 Practicing Multiplication and Division

Use paper and pencil to solve the following problems. Estimate to be sure your answers are reasonable. Use a separate sheet of paper to show your work.

A. $607 \times 8 =$ _____ B. $174 \times 9 =$ _____ C. $435 \div 3 =$ _____

D. $420 \div 9 =$ _____ E. $4631 \times 5 =$ _____ F. $768 \div 5 =$ _____

G. $68 \times 34 =$ _____ H. $577 \div 7 =$ _____ I. $1652 \div 4 =$ _____

Part 3 Fractions

1. Solve the following addition and subtraction problems.

A. $\frac{1}{2} + \frac{5}{8} =$ _____

B. $\frac{2}{3} + \frac{1}{12} =$ _____

C. $\frac{7}{12} - \frac{1}{2} =$ _____

D. $\frac{3}{5} - \frac{3}{10} =$ _____

2. Draw pictures to help you answer these questions.

A. One furlong is $\frac{1}{8}$ mile. How many furlongs equal one mile?

B. A tablespoon is $\frac{1}{16}$ of a cup. How many tablespoons equal one cup?

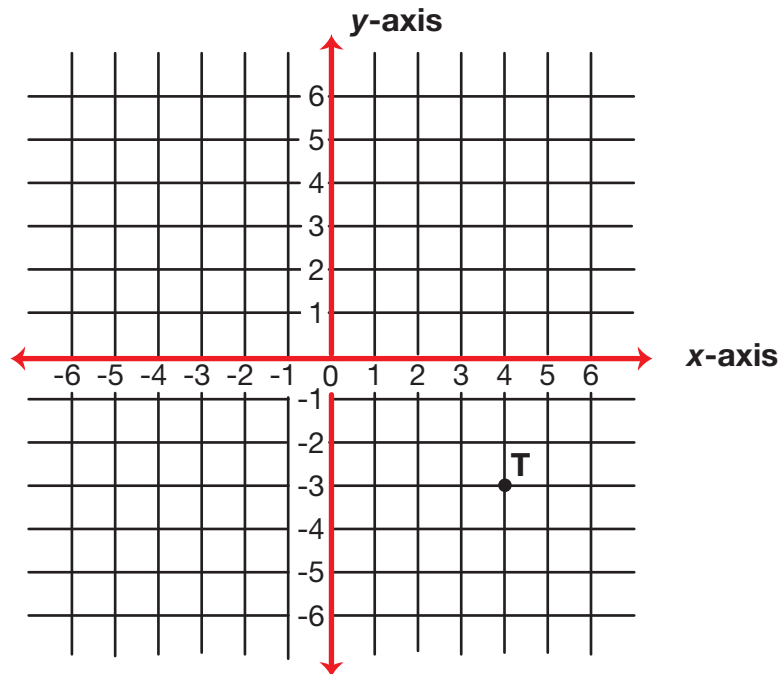
C. One foot is $\frac{1}{3}$ of a yard. How many feet equal one yard?

D. 5 minutes is $\frac{1}{12}$ of an hour. How many minutes equal $\frac{3}{12}$ of an hour?

E. 24 karat gold is pure gold. 1 karat gold means that 1 out of 24 parts is pure. 10 karat gold is $\frac{10}{24}$ or $\frac{5}{12}$ pure. Is 14 karat gold more or less than $\frac{1}{2}$ pure gold? Explain your thinking.

Part 4 Working with Coordinates

1. Name the coordinates of point T on the graph.
2. Plot three other points on the graph so that you can form a rectangle when you connect the points. Label each with a letter.



3. Use ordered pairs to list the coordinates of the three points you plotted.

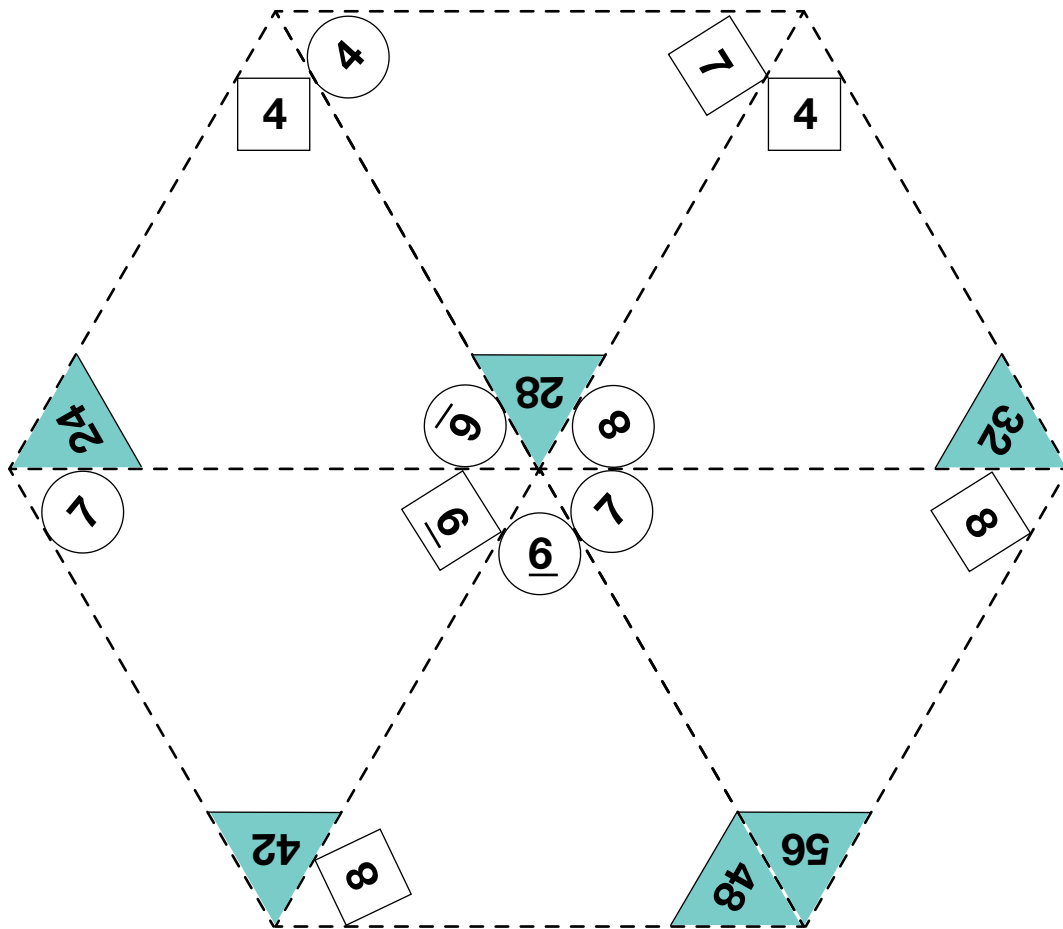
Part 5 Travel Time Problems

Choose an appropriate method to solve each of the following problems. For some questions you may need to find an exact answer, while for others you may only need an estimate. For each question, you may choose to use paper and pencil, mental math, or a calculator. Use a separate sheet of paper to show how you solved each problem.

1. John and his family are driving from Chicago, Illinois, to Phoenix, Arizona. His family plans to take 4 days to make this trip. Phoenix is 1776 miles from Chicago. About how many miles should they drive each of the four days if they want to drive about the same amount each day?
2. On the first day of the trip, John's family leaves home at 7:30 AM. They drive for 4 hours before stopping to eat lunch. If they average 62 miles per hour, how far did they drive before stopping?
3. At the end of the second day of driving, John's family has traveled a total of 957 miles and has spent $16\frac{1}{2}$ hours on the road. About how many miles per hour did they average so far on their trip?
4. One night John's family stops for pizza. They order a large pizza that is $\frac{1}{2}$ pepperoni and $\frac{1}{2}$ cheese. It is cut into 16 slices of the same size. If John eats one slice of pepperoni and one slice of cheese, what fraction of the pizza is this?
5. In Phoenix, John's family stays in a hotel for 7 nights. The hotel costs \$97.00 per night including tax. What is the total bill for their 7-night stay?
6. When John's family arrives home, he calculates the number of gallons of gasoline they used during their trip to and from Phoenix. The car averages about 24 miles per gallon.
 - A. How many gallons of gas did they use during the drive to and from Phoenix?
 - B. If the average cost of gasoline is \$3.57 per gallon, how much money did John's family spend on gasoline during the trip?

Triangle Flash Cards: Last Six Facts

- Work with a partner. Each partner cuts out the flash cards.
- To quiz you on a multiplication fact, your partner covers the shaded number. Multiply the two uncovered numbers.
- To quiz you on a division fact, your partner covers the number in the square or the number in the circle. Solve a division fact with the two uncovered numbers.
- Divide the used cards into three piles: Facts I Know Quickly, Facts I Can Figure Out, and Facts I Need to Learn. Place the first pile in an envelope labeled "Facts I Know."
- Practice the last two piles again. Place these cards in an envelope labeled "Facts to Practice."



Multiplication Facts I Know

- Circle the facts you know well.
- Keep this table and use it to help you multiply.
- As you learn more facts, you may circle them too.

×	0	1	2	3	4	5	6	7	8	9	10
0	0	0	0	0	0	0	0	0	0	0	0
1	0	1	2	3	4	5	6	7	8	9	10
2	0	2	4	6	8	10	12	14	16	18	20
3	0	3	6	9	12	15	18	21	24	27	30
4	0	4	8	12	16	20	24	28	32	36	40
5	0	5	10	15	20	25	30	35	40	45	50
6	0	6	12	18	24	30	36	42	48	54	60
7	0	7	14	21	28	35	42	49	56	63	70
8	0	8	16	24	32	40	48	56	64	72	80
9	0	9	18	27	36	45	54	63	72	81	90
10	0	10	20	30	40	50	60	70	80	90	100

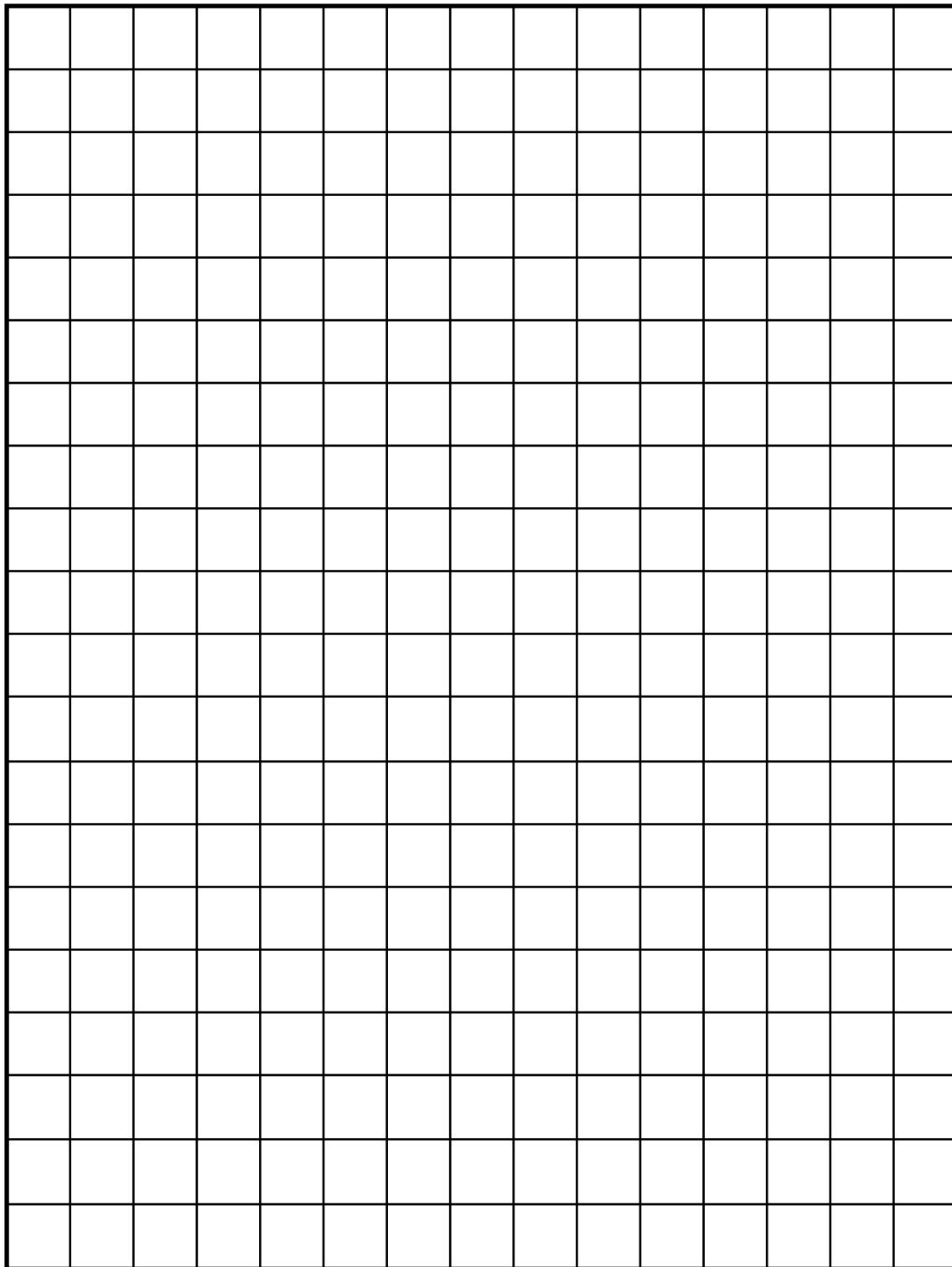
Division Facts I Know

- Circle the facts you know well.
- Keep this table and use it to help you divide.
- As you learn more facts, you may circle them too.

×	0	1	2	3	4	5	6	7	8	9	10
0	0	0	0	0	0	0	0	0	0	0	0
1	0	1	2	3	4	5	6	7	8	9	10
2	0	2	4	6	8	10	12	14	16	18	20
3	0	3	6	9	12	15	18	21	24	27	30
4	0	4	8	12	16	20	24	28	32	36	40
5	0	5	10	15	20	25	30	35	40	45	50
6	0	6	12	18	24	30	36	42	48	54	60
7	0	7	14	21	28	35	42	49	56	63	70
8	0	8	16	24	32	40	48	56	64	72	80
9	0	9	18	27	36	45	54	63	72	81	90
10	0	10	20	30	40	50	60	70	80	90	100

Divisor

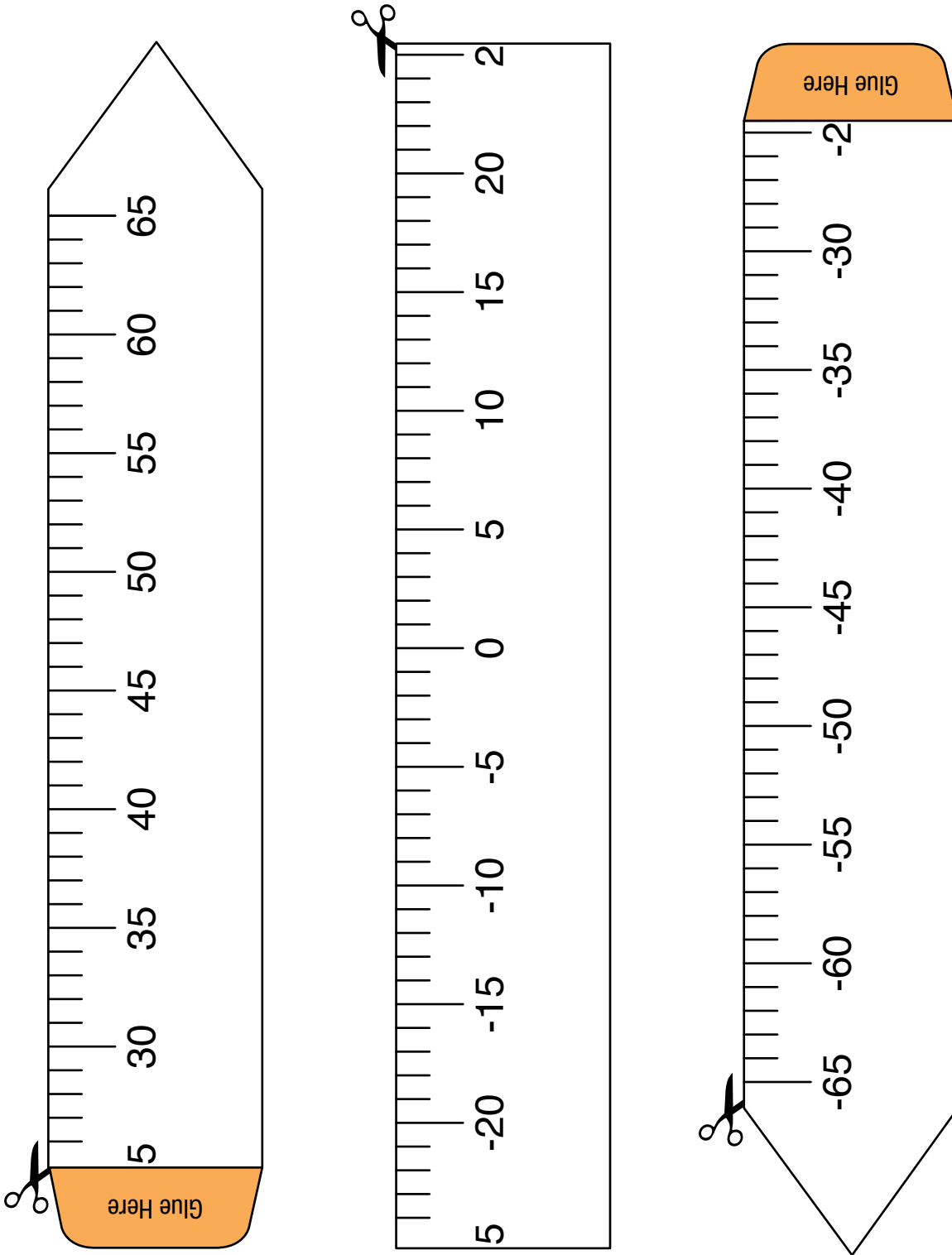
Name _____ Date _____



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Extended Number Line

Cut out the number line pieces below and tape or glue them at the tabs.








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Professor Peabody Made a Mess

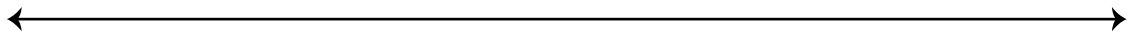
Professor Peabody was reading the morning paper and spilled his tea. The tea covered parts of the weekly weather report.

- Help figure out what the stained parts of the paper say. Use a number line to help you solve the problems.

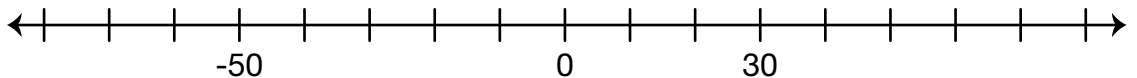
Minnesota State Daily Weather Changes

	Day of Week	Temperature in Morning	Change in Temperature	Temperature in Evening
A.	Monday	42°F	drops 35°F	
B.	Tuesday	35°F		15°F
C.	Wednesday		drops 20°F	-6°F
D.	Thursday	27°F	rises 22°F	
E.	Friday	-12°F		-23°F

- Show how to use the number line to solve Question 1C.

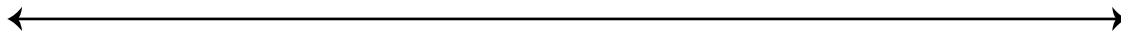


- Label the following numbers on the number line: 55, -20, 73, -32

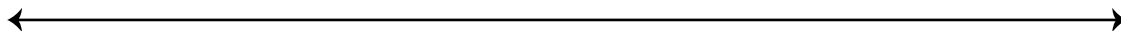


Show how to represent and solve each problem with a number line.

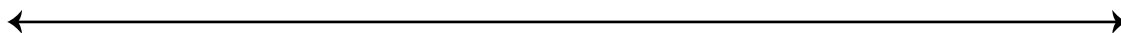
3. Carla parks her car in a parking garage below a building. She parks 3 floors below ground level and takes the elevator up to the 29th floor. Find the total number of floors Carla traveled.



4. When Professor Peabody left Arizona, the temperature was 55°F. When he arrived in Minnesota, the temperature was -12°F. What is the temperature difference?



5. Submarine A is traveling at 10 feet below sea level. Submarine B is traveling at 6 feet below sea level. Which submarine is traveling deeper in the ocean?



6. The Dead Sea is -1348 feet below sea level. If the elevation of the Dead Sea is 1066 feet lower than Death Valley, what is the elevation of Death Valley?

Elevation

Location	Elevation (in feet)
Dead Sea	-1348
Death Valley	



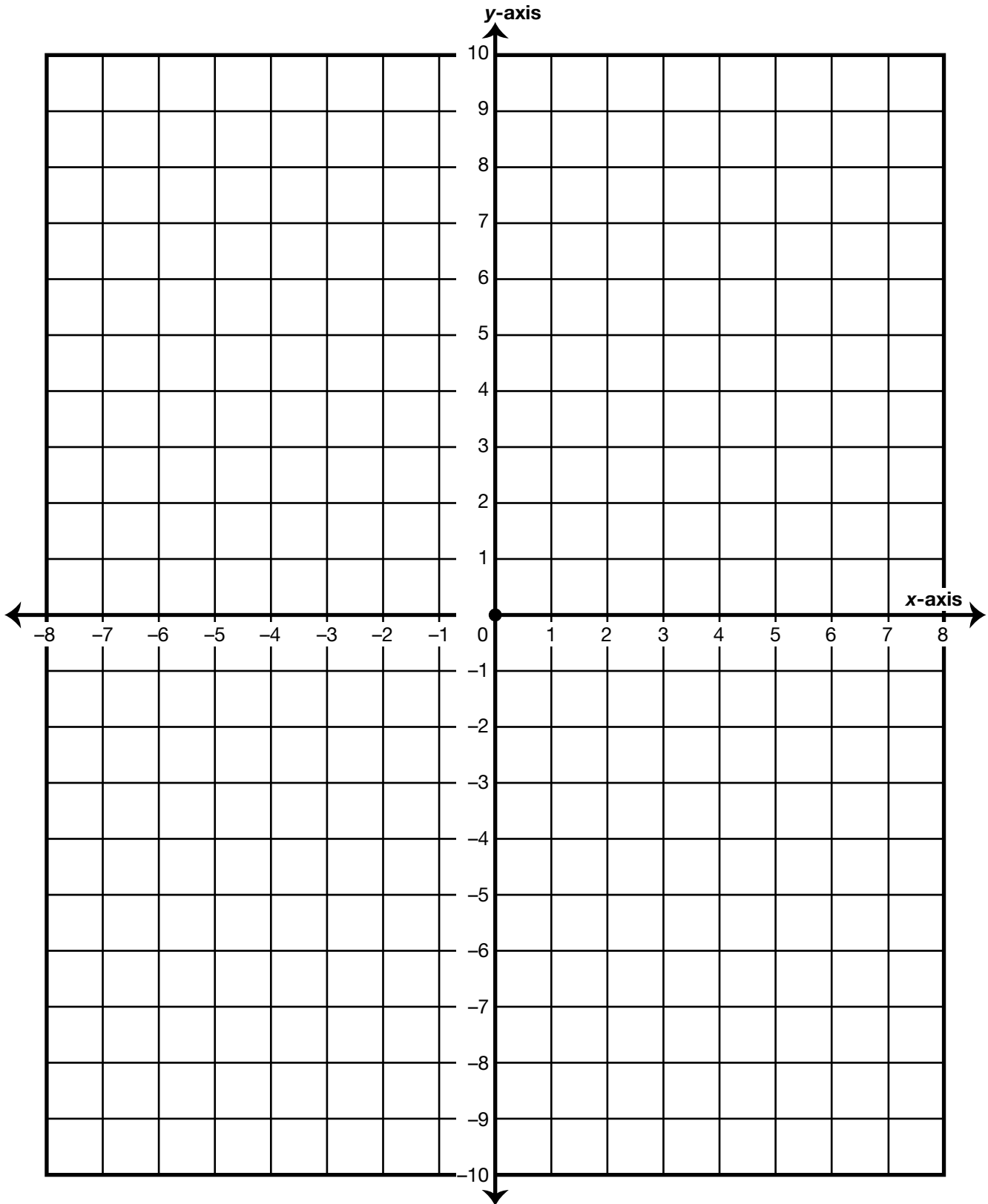
Name _____ Date _____

**Professor Peabody Made a Mess
Feedback Box**

	Expectation	Check In	Comments
Represent negative numbers using a number line. [Q# 1C, 2–6]	E1		
Solve problems involving negative numbers. [Q# 1, 3–6]	E2		

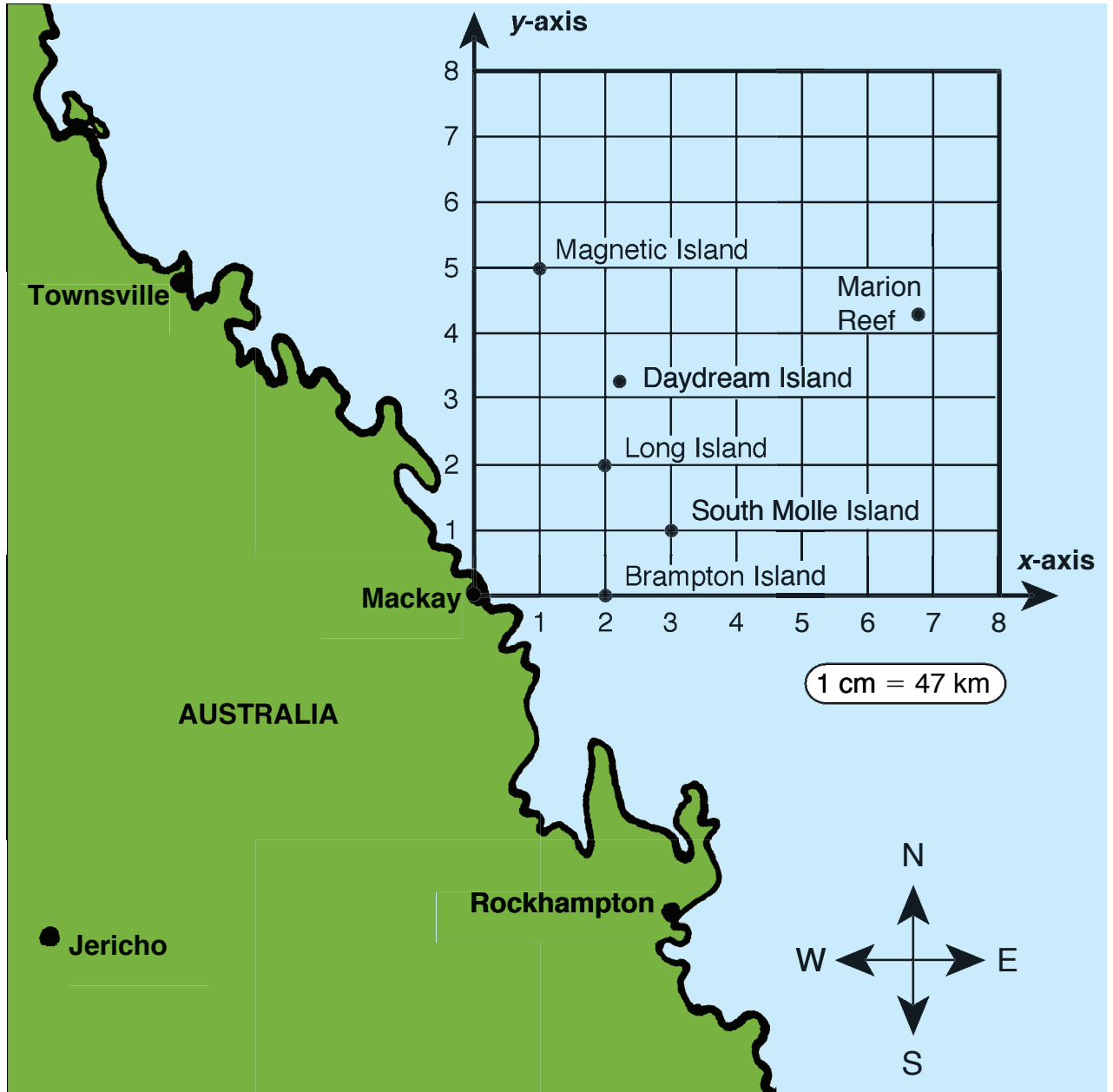
	Yes ...	Yes, but ...	No, but ...	No ...
MPE5. Show my work. I show or tell how I arrived at my answer so someone else can understand my thinking.				

Four-Quadrant Grid Paper



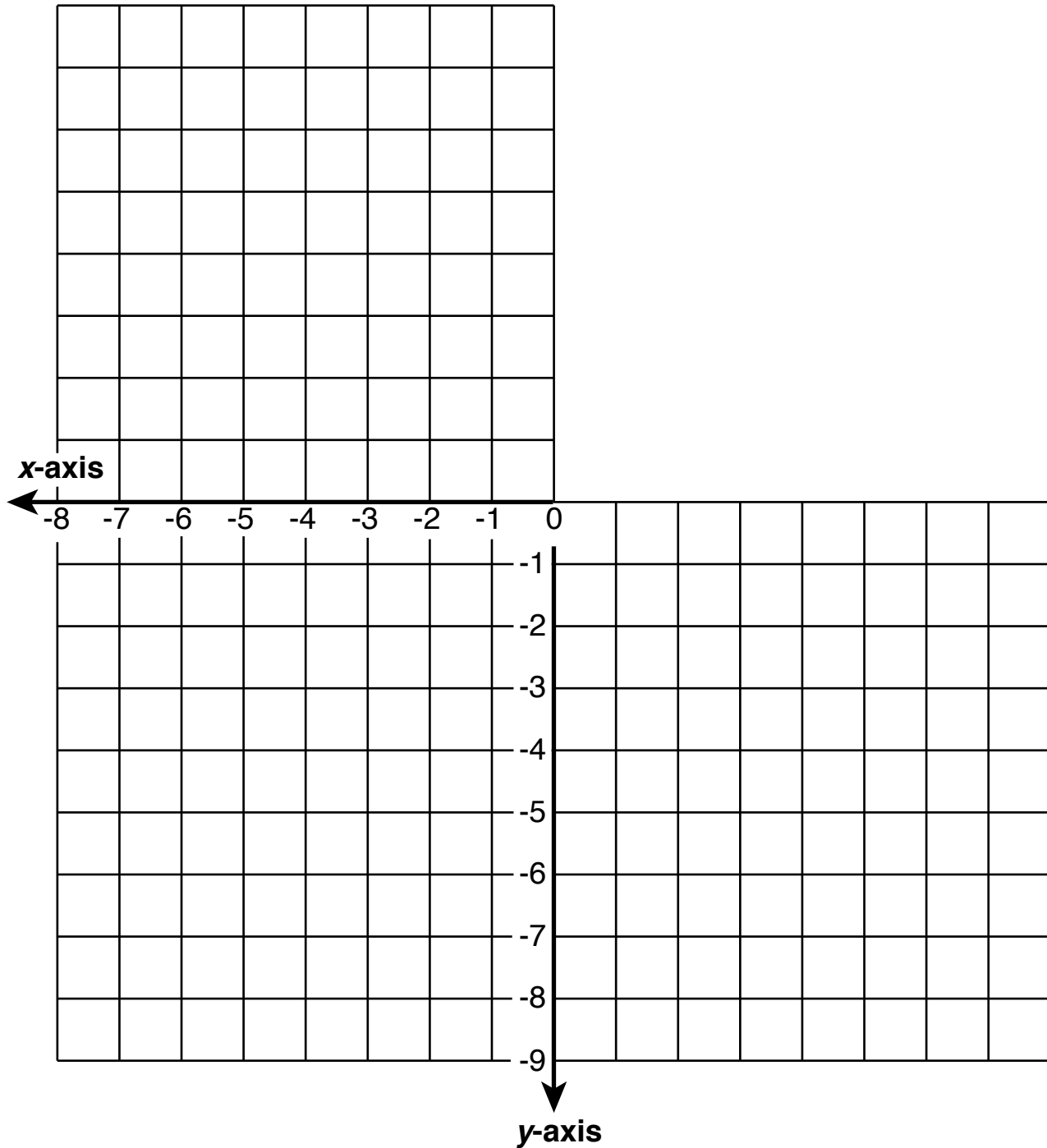
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Great Barrier Reef Map



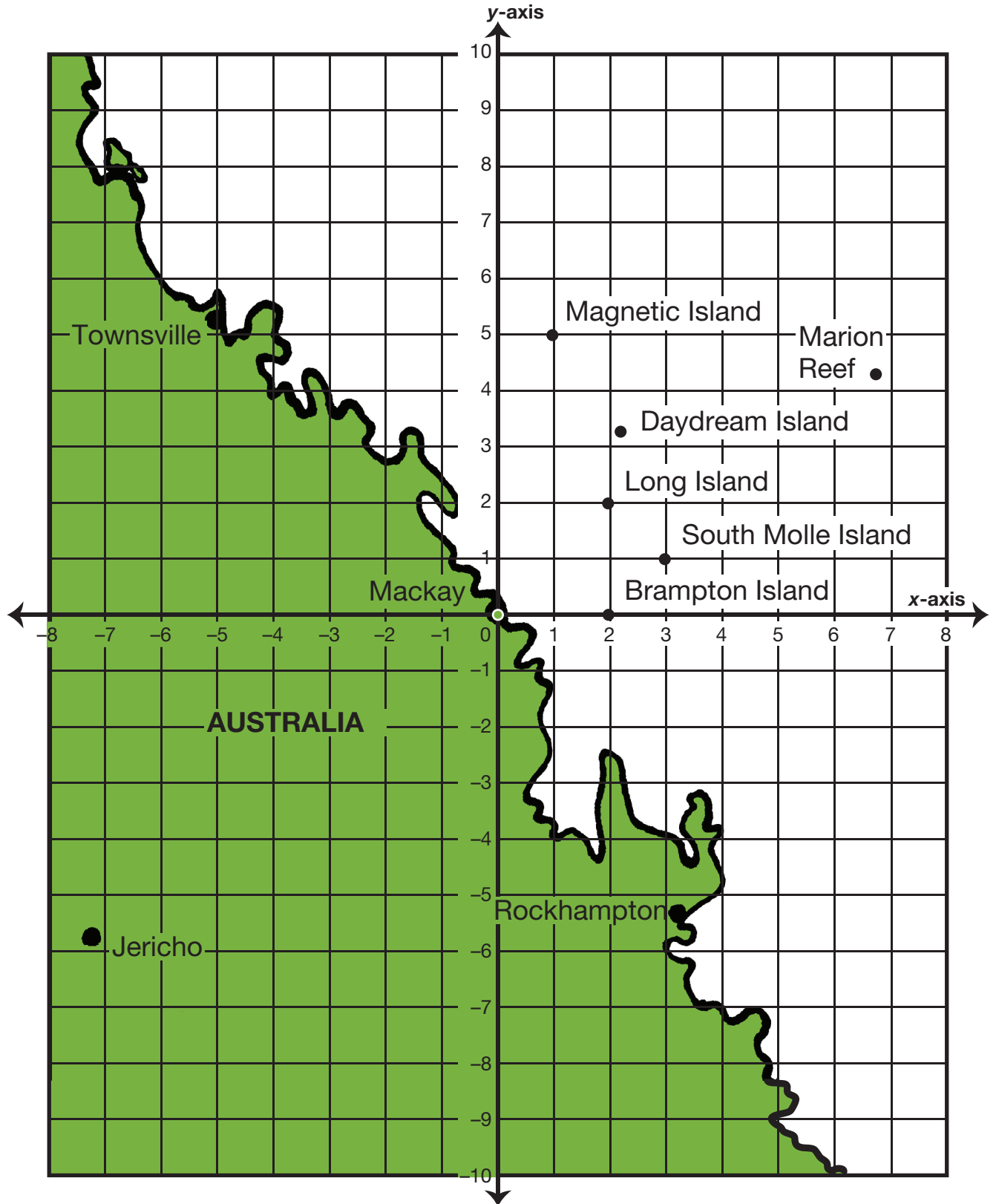
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Quadrant Overlay



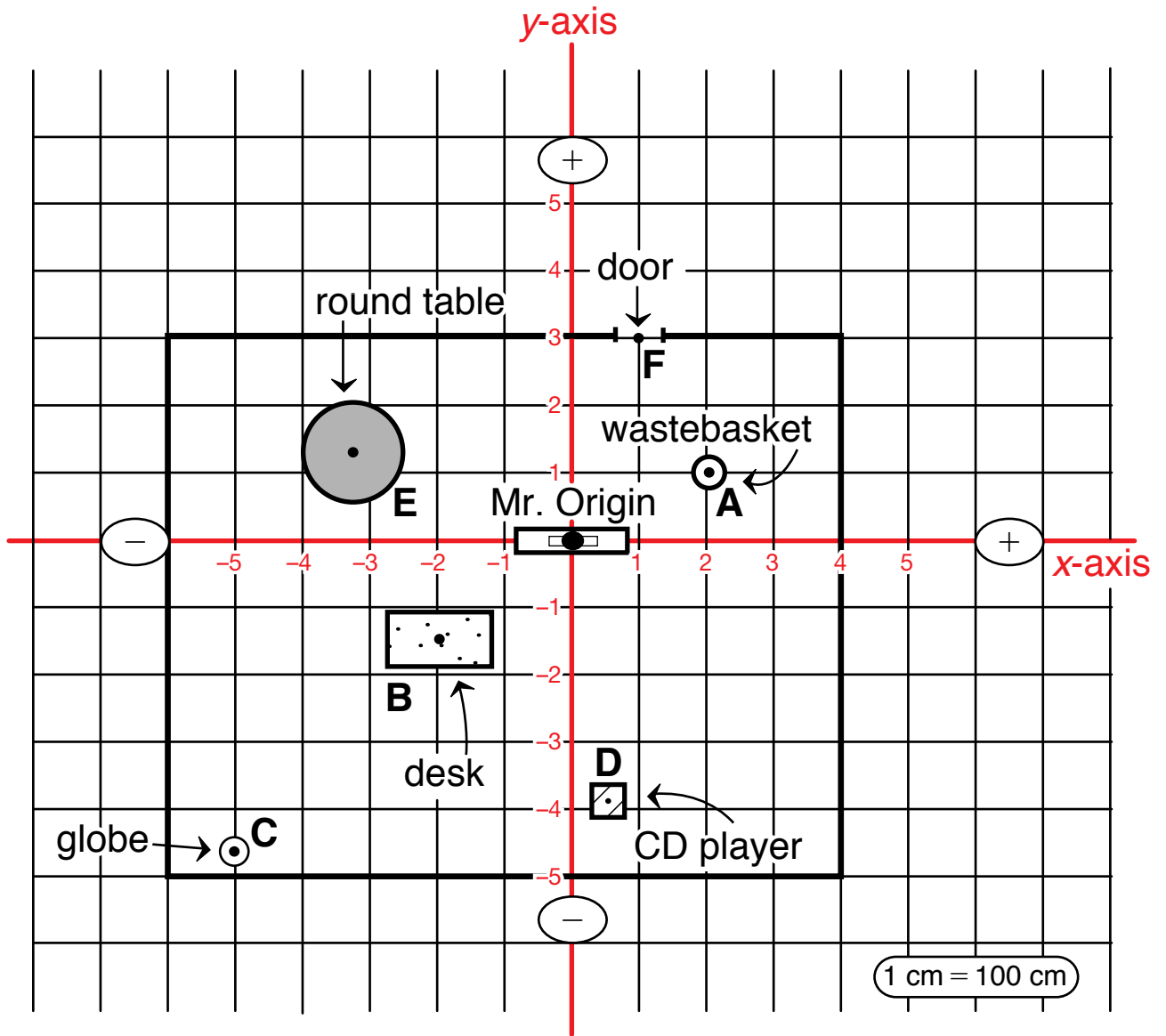
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Great Barrier Reef Map with Overlay



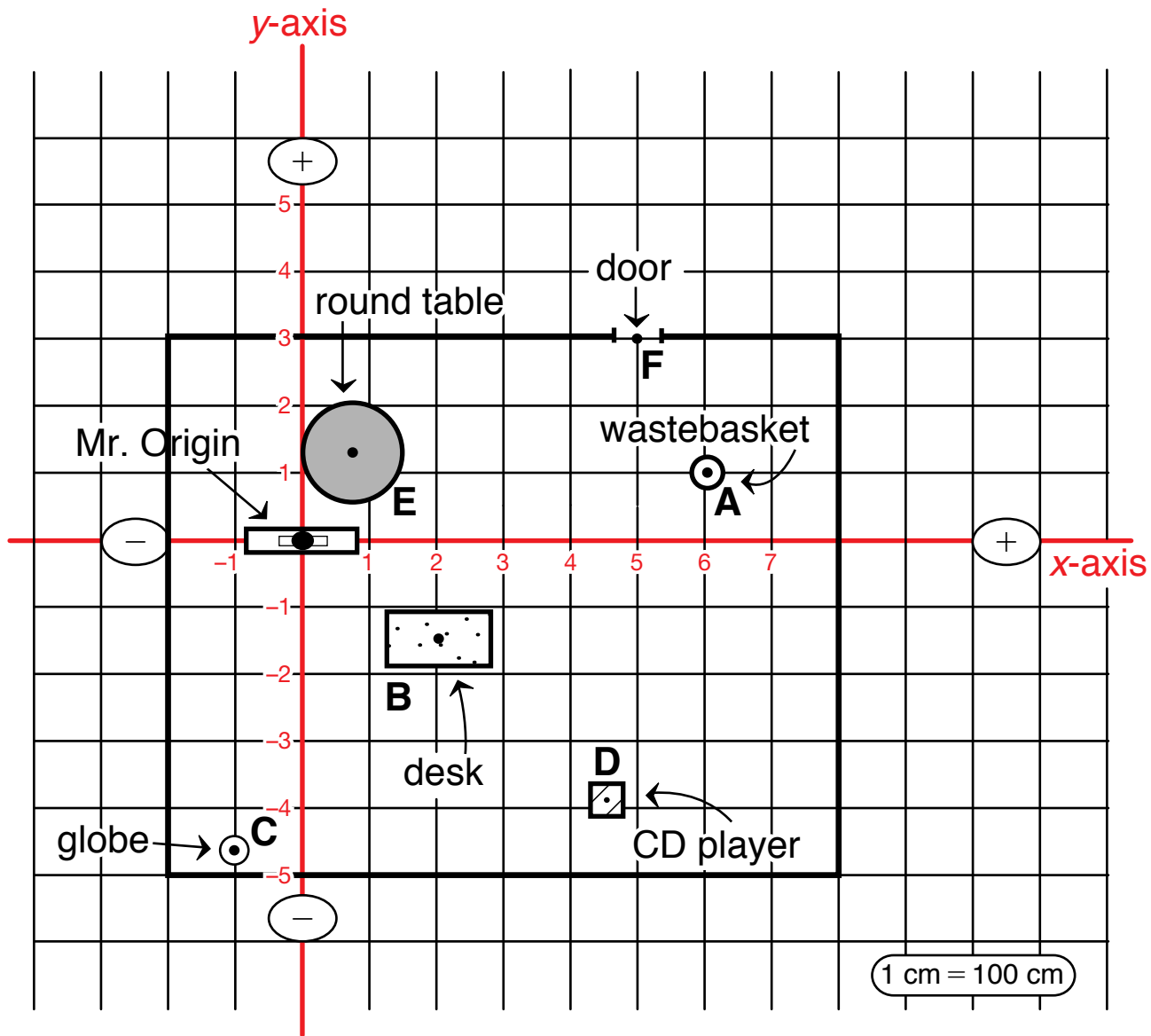
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Mr. Moreno's Class Map



1. Describe the location of the globe and the wastebasket.
2. Estimate the distance between the wastebasket and the globe.

Milo Moved Mr. Origin

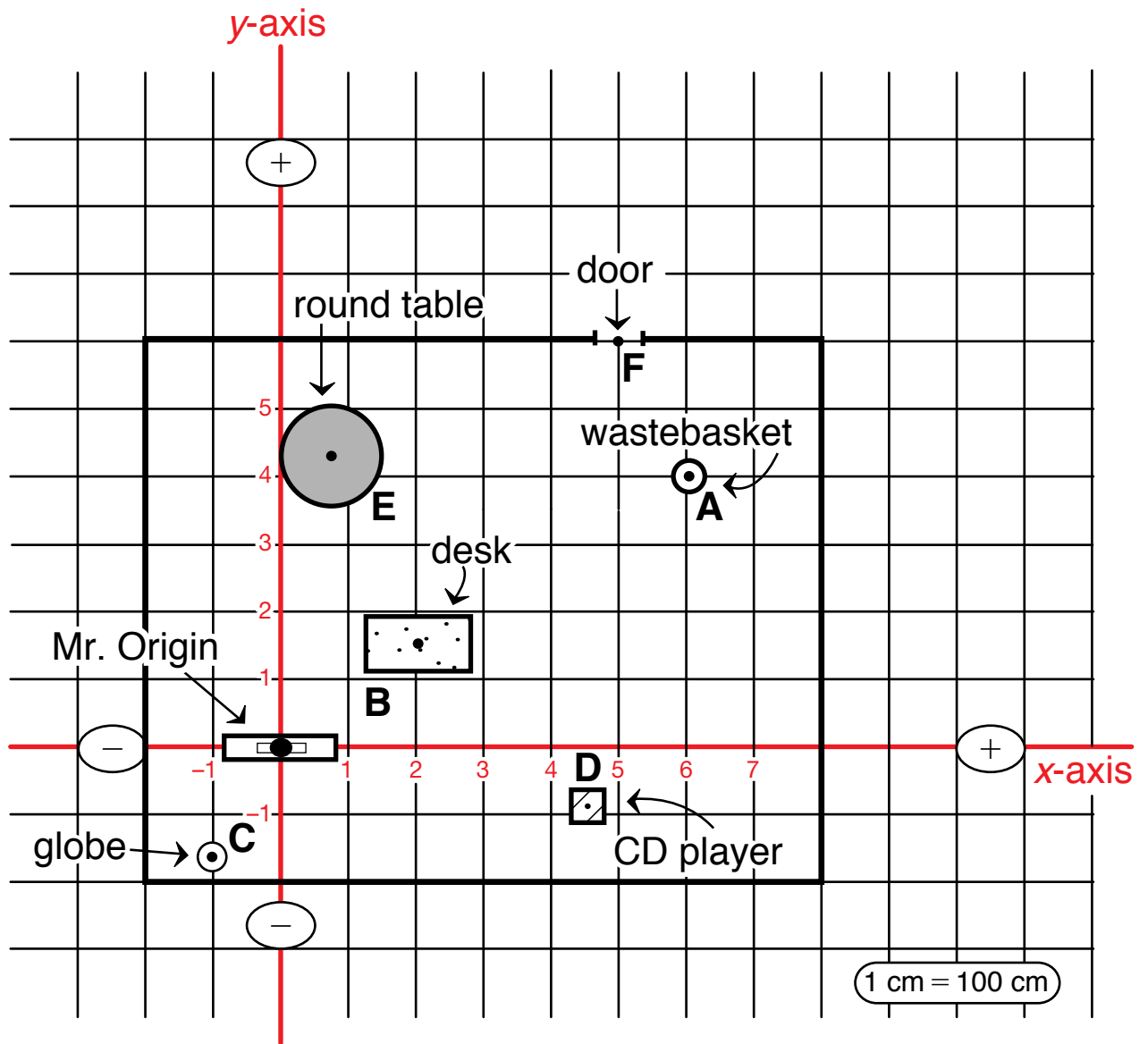


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1. Describe the location of the globe and the wastebasket.

2. Estimate the distance between the wastebasket and the globe.

Milo Moved Mr. Origin Again



1. Describe the location of the globe and the wastebasket.
2. Estimate the distance between the wastebasket and the globe.

Kingdom of Nuggles

King Bradyskins lives in the King's Palace at (0, 0). He wants to build roads from his palace to each town in the Kingdom.

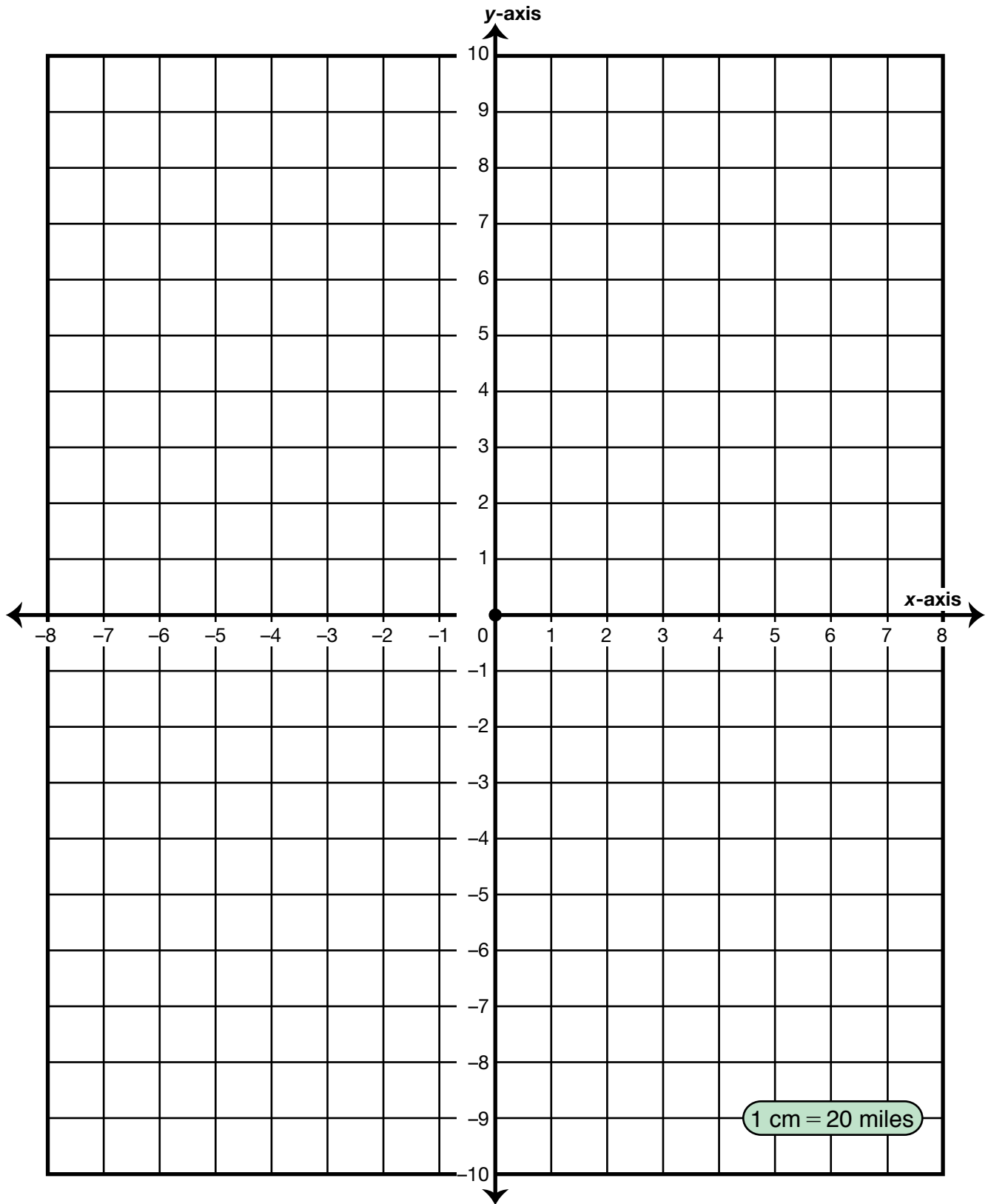
1. Draw a map of the cities in the Land of Nuggles on Four-Quadrant Grid Paper on the Map of the Kingdom of Nuggles section.

Towns in the Kingdom of Nuggles

	City	Coordinates
A.	Adamville	(8, -5)
B.	Bradytown	(-8, -4)
C.	Candyville	(5, 7)
D.	Dodge City	(-2, 10)
E.	Evermore	(4, -6)

2. King Bradyskins wants each road to be a straight line. Draw the roads from the King's Palace to each city.
3. The scale of the map is 1 cm = 20 miles. Estimate the distance between the King's Palace and each town. Include units.
 - A. Adamville
 - B. Bradytown
 - C. Candyville
 - D. Dodge City
 - E. Evermore
 - F. Show or tell how you solved Questions 3E.
4. King Bradyskin's horse and carriage can travel 10 miles per hour. How long will it take him to travel to Candyville?

Map of the Kingdom of Nuggles



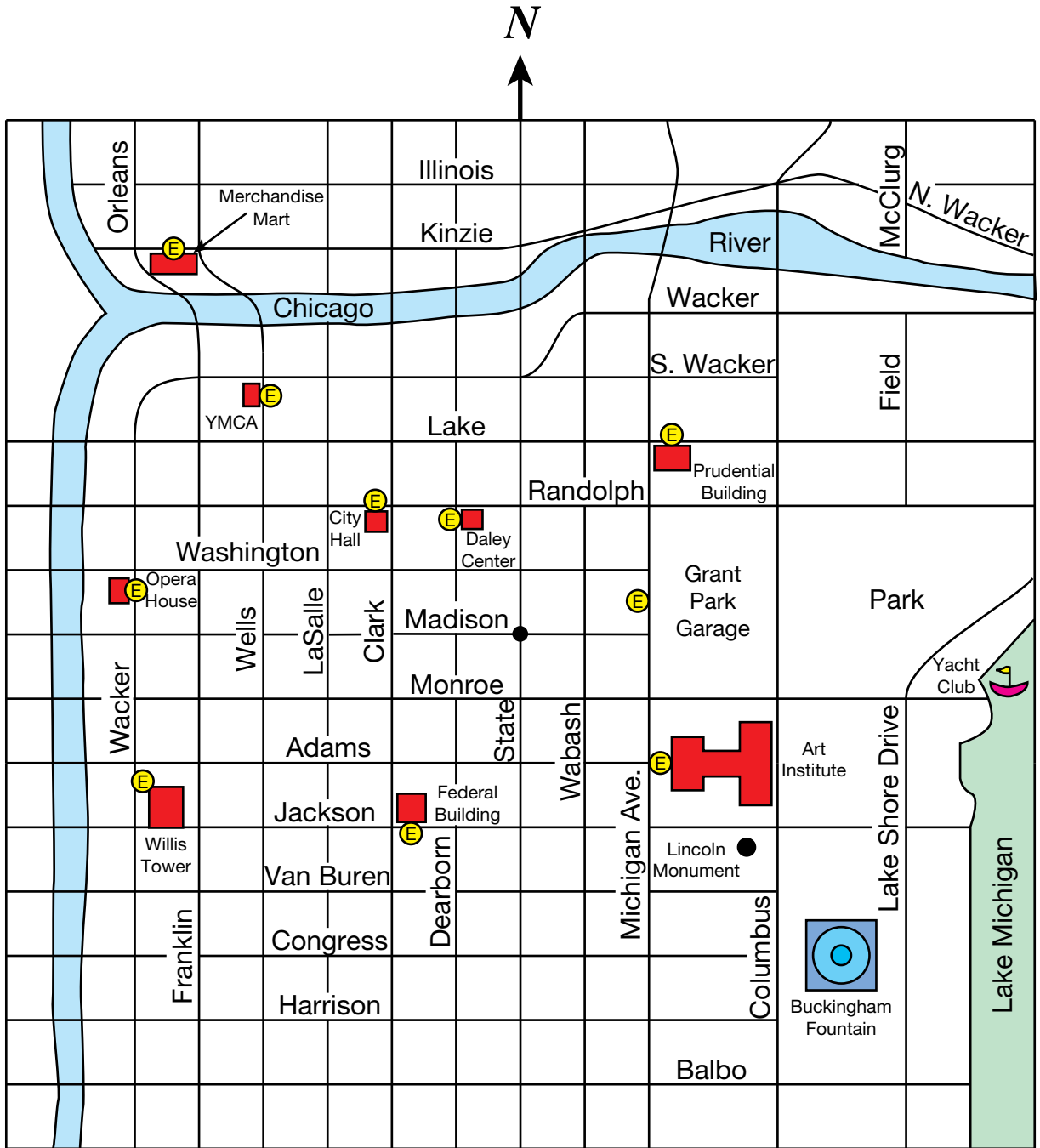
Name _____ Date _____

**Kingdom of Nuggles
Feedback Box**

	Expectation	Check In	Comments
Use ratios to solve scale and distance problems. [Q# 3–4]	E3		
Plot points in all four quadrants from ordered pairs. [Q# 1]	E6		

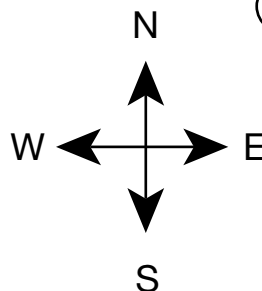
	Yes ...	Yes, but ...	No, but ...	No ...
MPE5. Show my work. I show or tell how I arrived at my answer so someone else can understand my thinking.				

Chicago Map

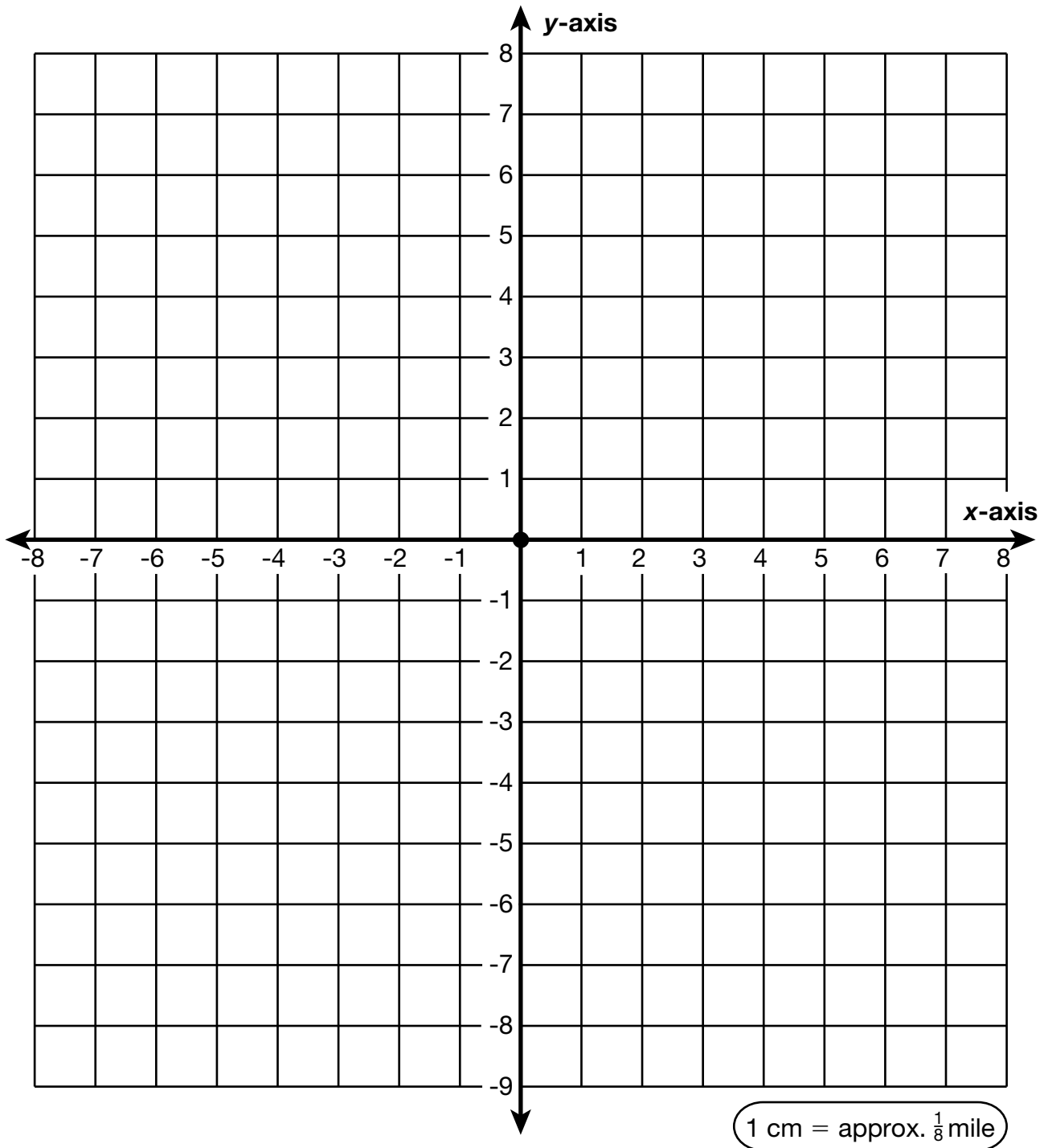


(E) Denotes Building Entrances

1 cm = approx. $\frac{1}{8}$ mile

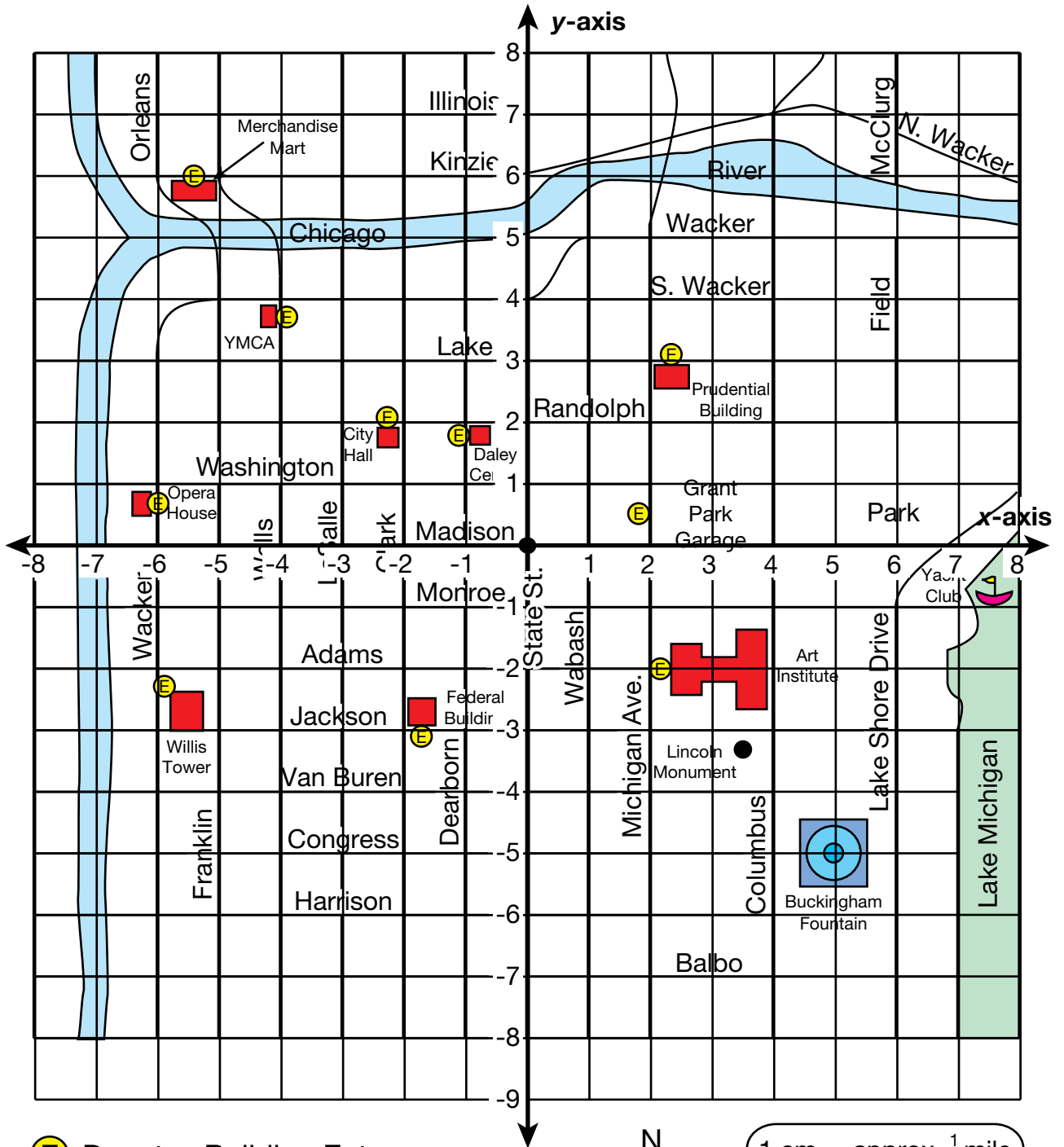


Chicago Grid



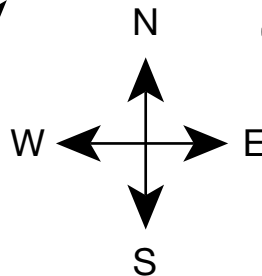
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Chicago Map with Grid

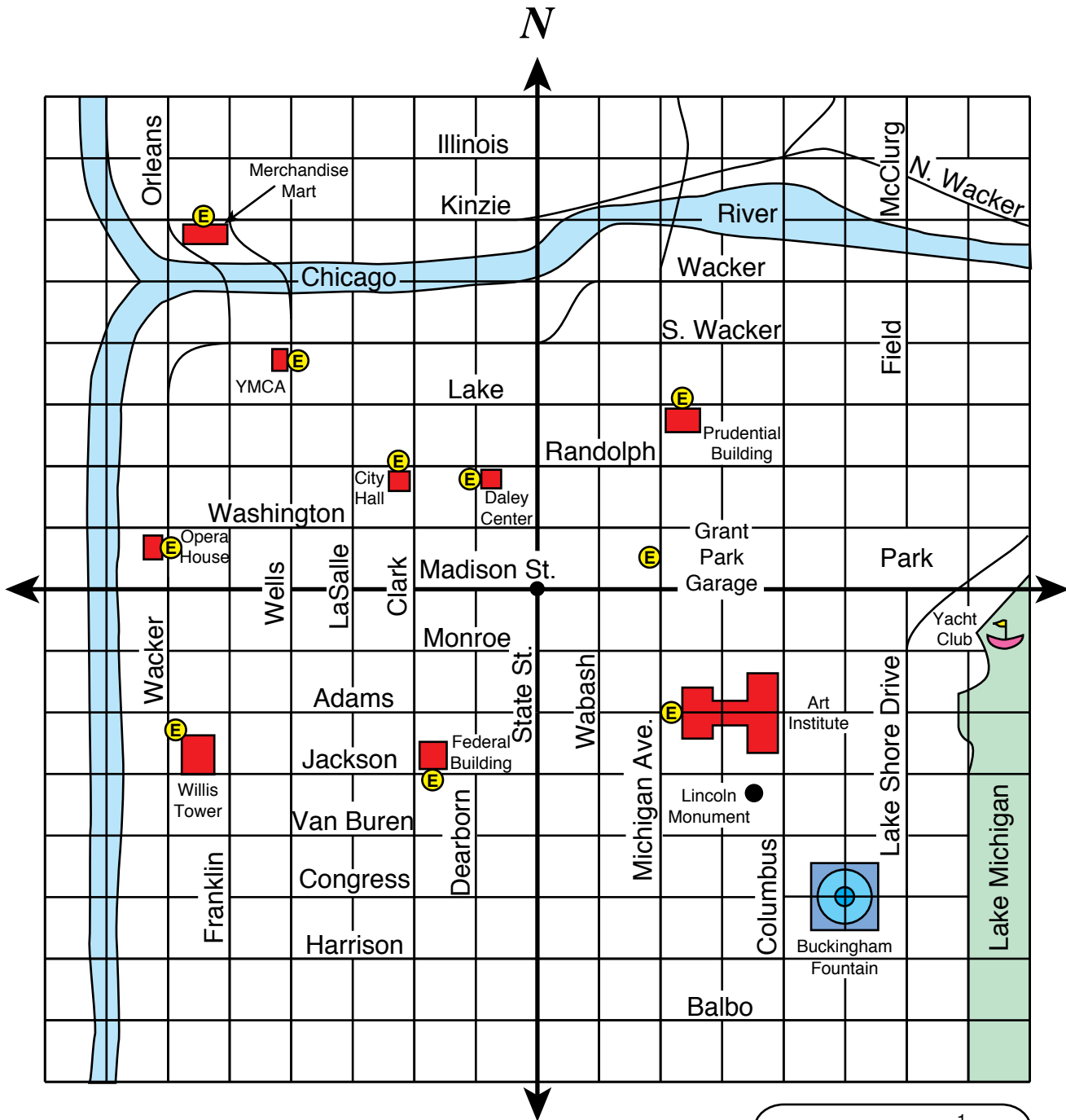


E Denotes Building Entrances

1 cm = approx. $\frac{1}{8}$ mile



Joe's Chicago Map



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Use the map to answer the following questions. The origin of the map is at the corner of State Street and Madison Street. Measure distances from the entrance to each location. The entrance is marked with an **E. Measure all walking distances along streets. Show how you solved each problem.**

1. If you walk from the Willis Tower to Buckingham Fountain, about how far would you walk?
2. If you walk from $(-6, -3)$ to $(-1, -3)$ to $(0, 0)$, about how far would you walk?
3. If you park in the Grant Park Garage and then go to the Opera House, about how far would you walk?
4. If you were at $(1, -7)$, about how far would you walk to get to the Merchandise Mart?

Name _____ Date _____

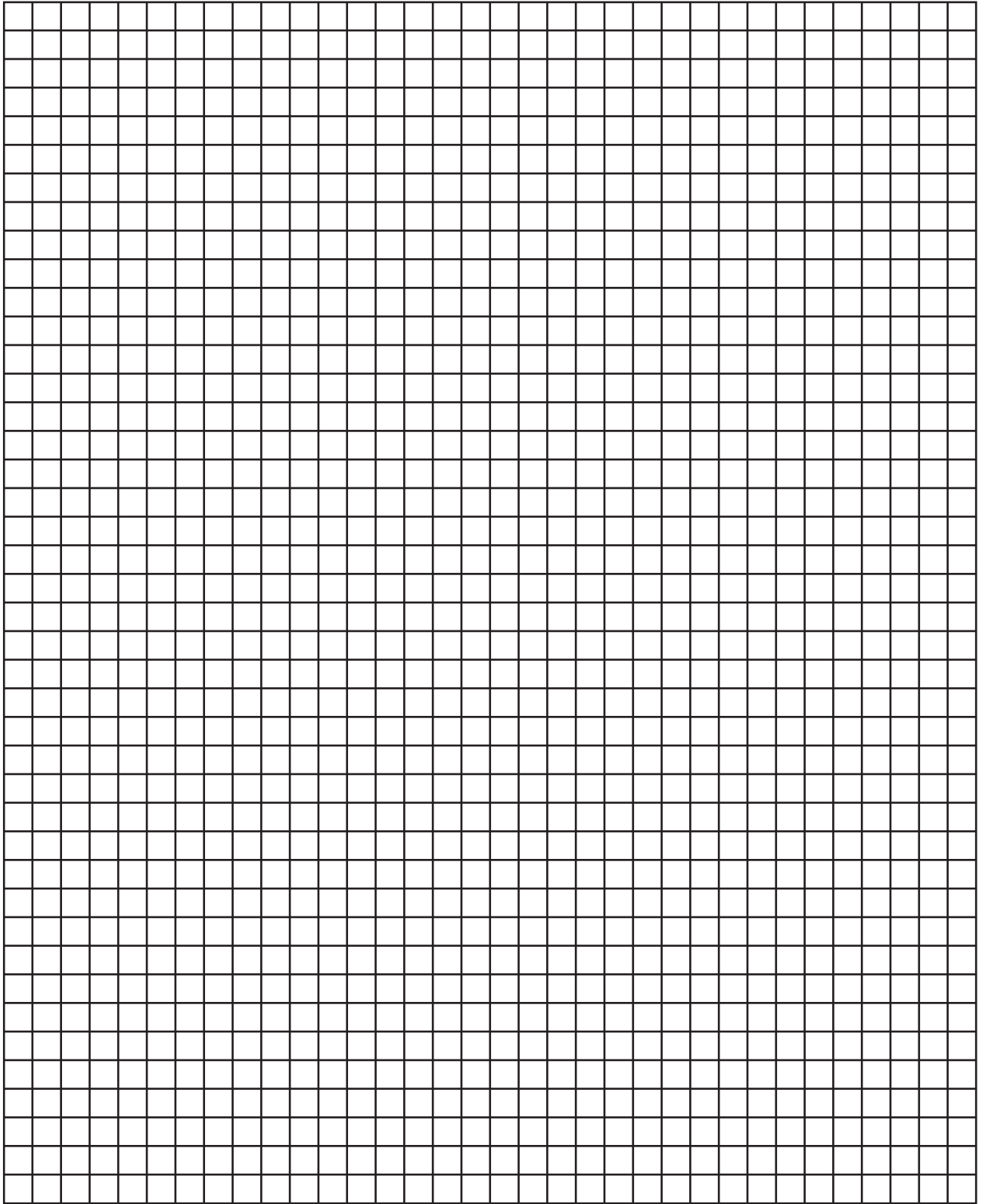
**Joe's Chicago Map
Feedback Box**

	Expectation	Check In	Comments
Use ratios to solve scale and distance problems. [Q# 1–4]	E3		
Identify and describe locations in all four quadrants using ordered pairs. [Q# 2, 4]	E6		

	Yes ...	Yes, but ...	No, but ...	No ...
MPE1. Know the problem. I read the problem carefully. I know the questions to answer and what information is important.				

Name _____ Date _____

Half-Centimeter Grid Paper

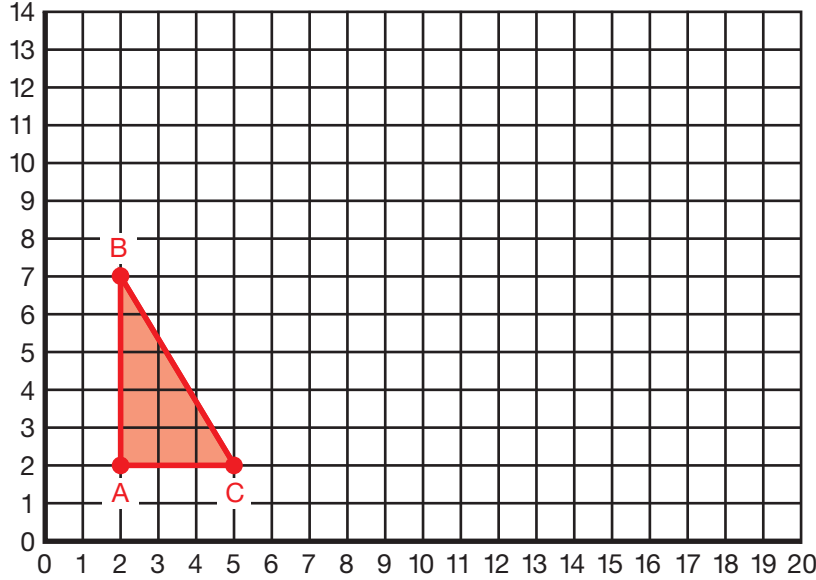


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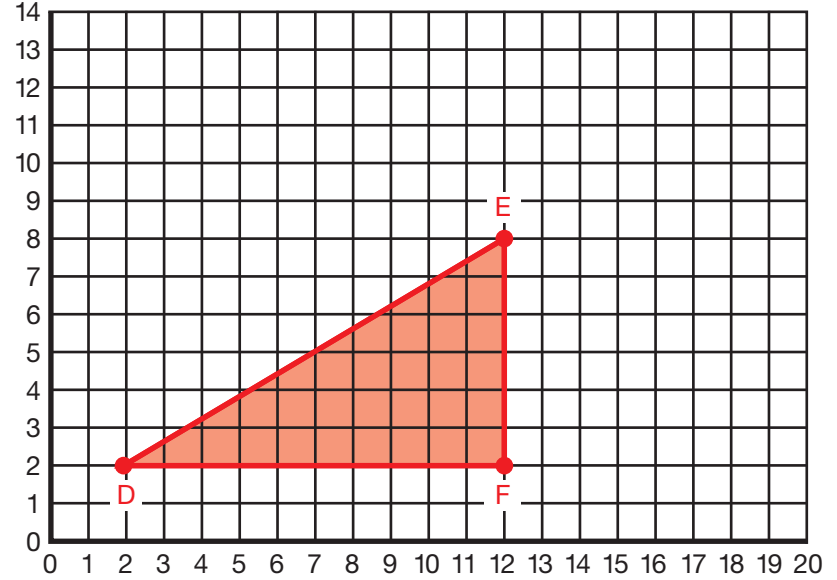
Shape Sort Cards

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A (2, 2) B (2, 7) C (5, 2) **1**



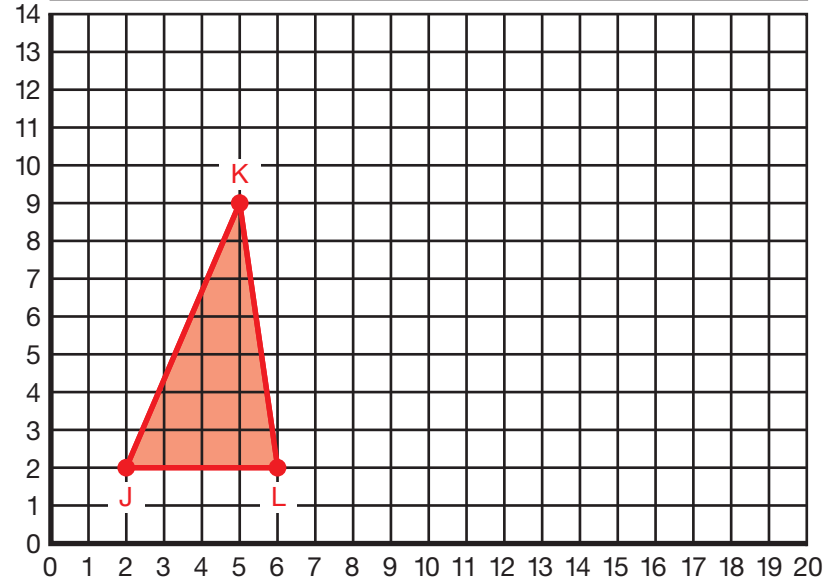
D (2, 2) E (12, 8) F (12, 2) **2**



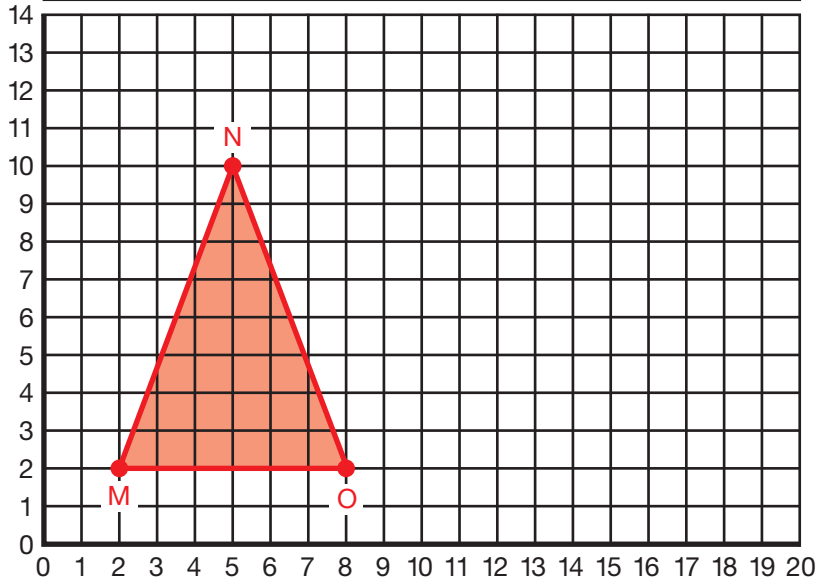
G (2, 2) H (1, 10) I (13, 1) **3**



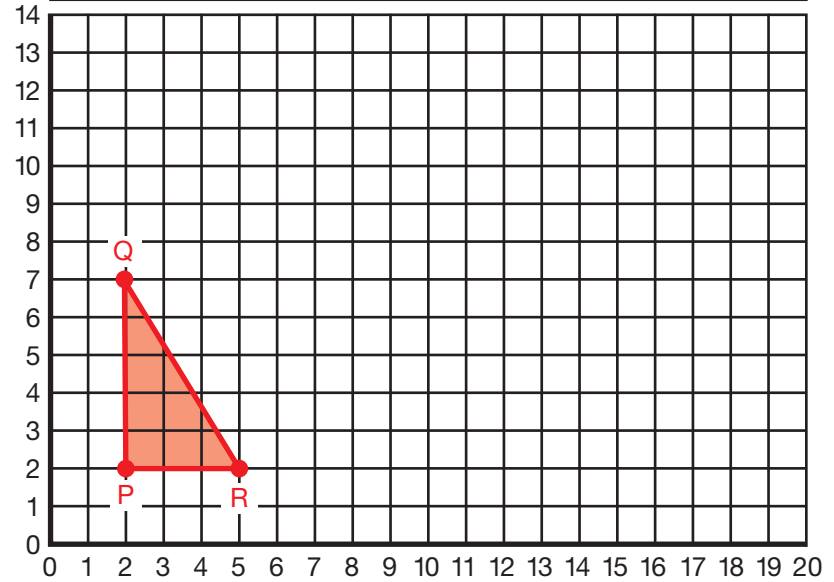
J (2, 2) K (5, 9) L (6, 2) **4**



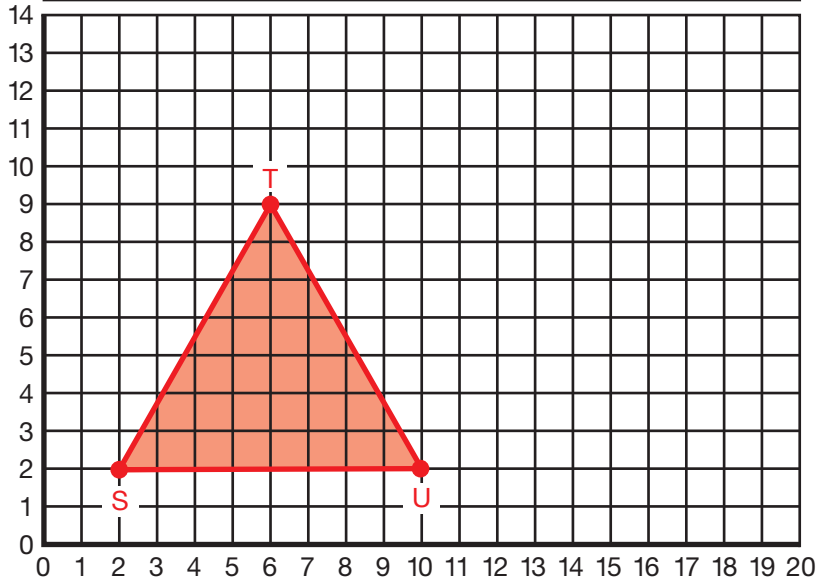
M (2, 2) N (5, 10) O (8, 2) 5



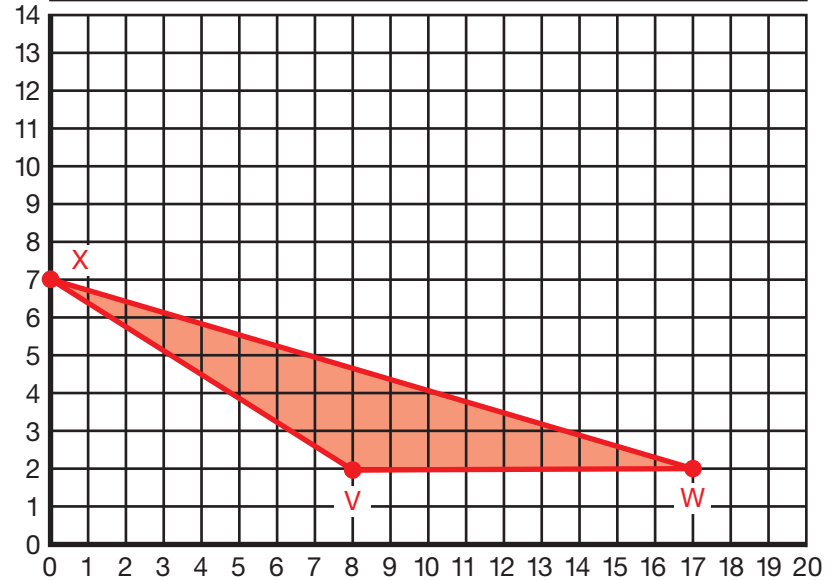
P (2, 2) Q (2, 7) R (5, 2) 6



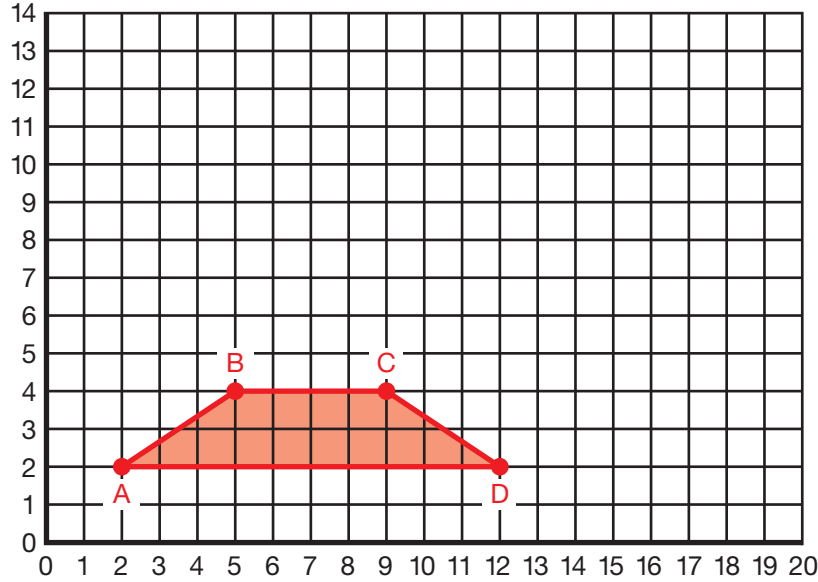
S (2, 2) T (6, 9) U (10, 2) 7



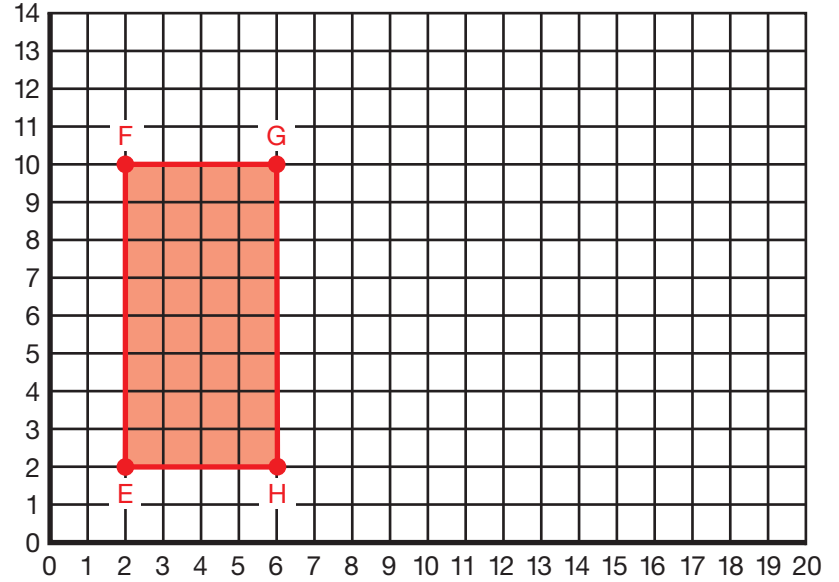
V (8, 2) W (17, 2) X (0, 7) 8



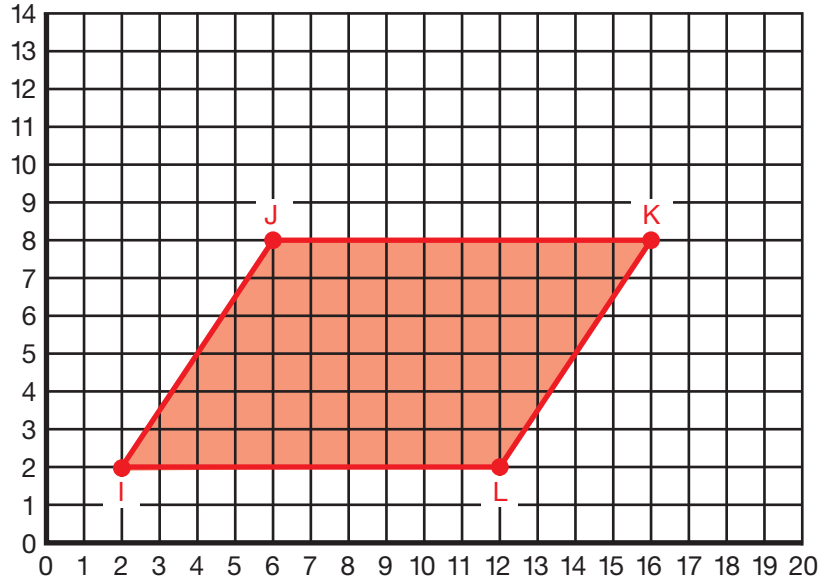
A (2, 2) B (5, 4) C (9, 4) D (12, 2) 9



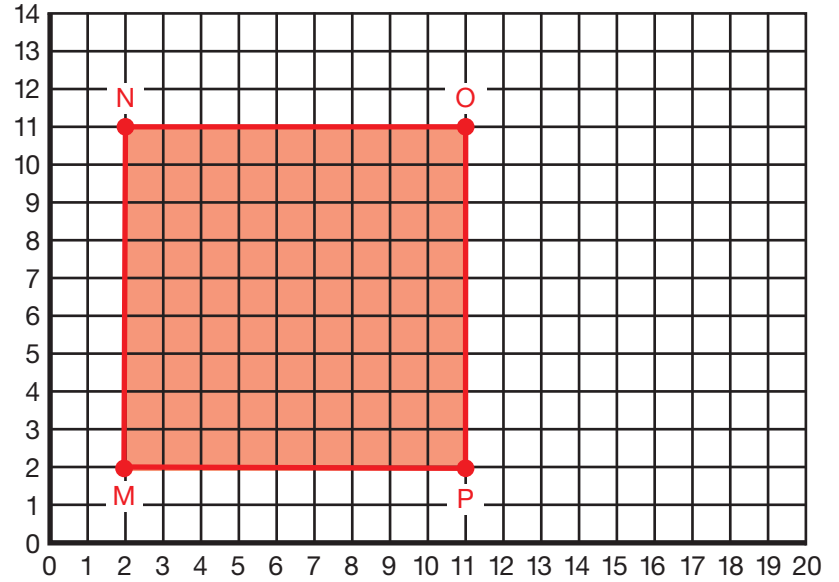
E (2, 2) F (2, 10) G (6, 10) H (6, 2) 10



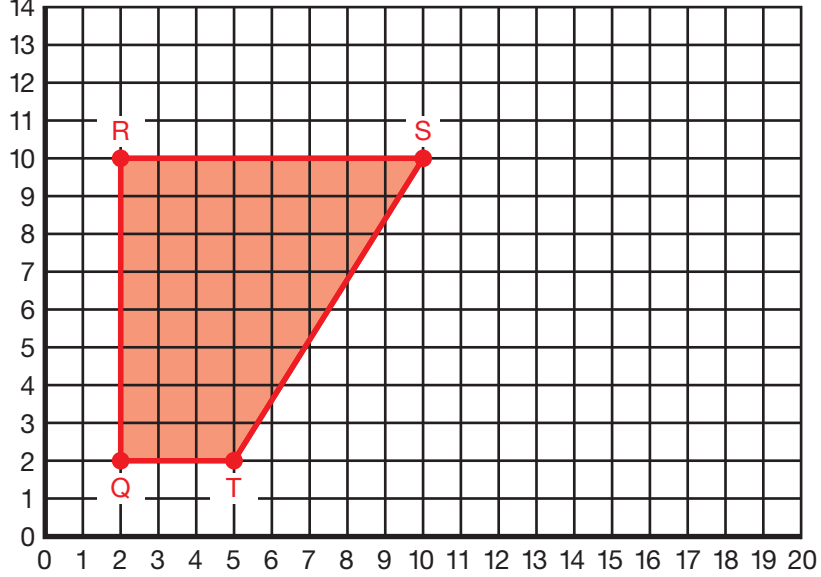
I (2, 2) J (6, 8) K (16, 8) L (12, 2) 11



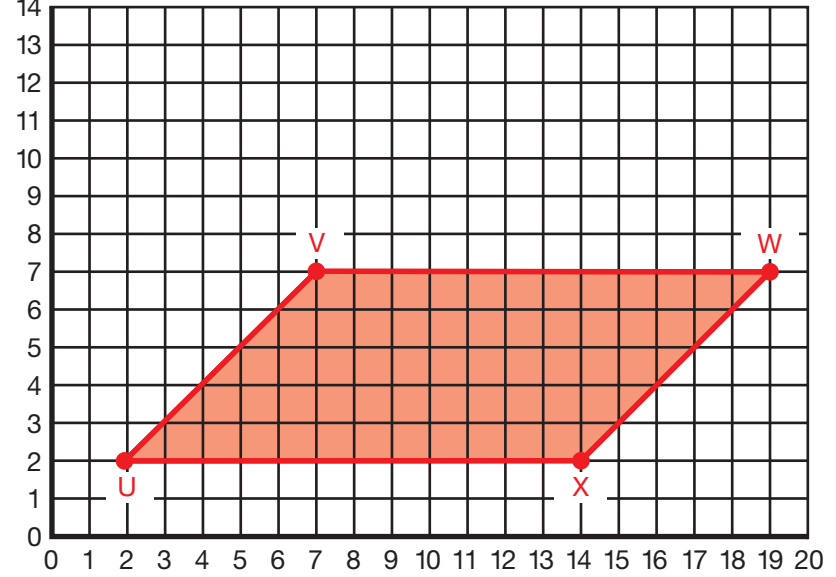
M (2, 2) N (2, 11) O (11, 11) P (11, 2) 12



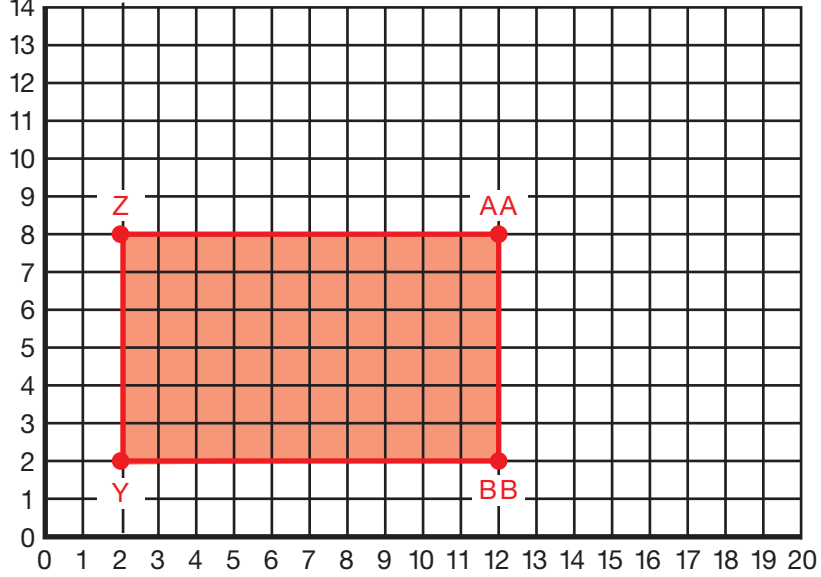
Q (2, 2) R (2, 10) S (10, 10) T (5, 2) 13



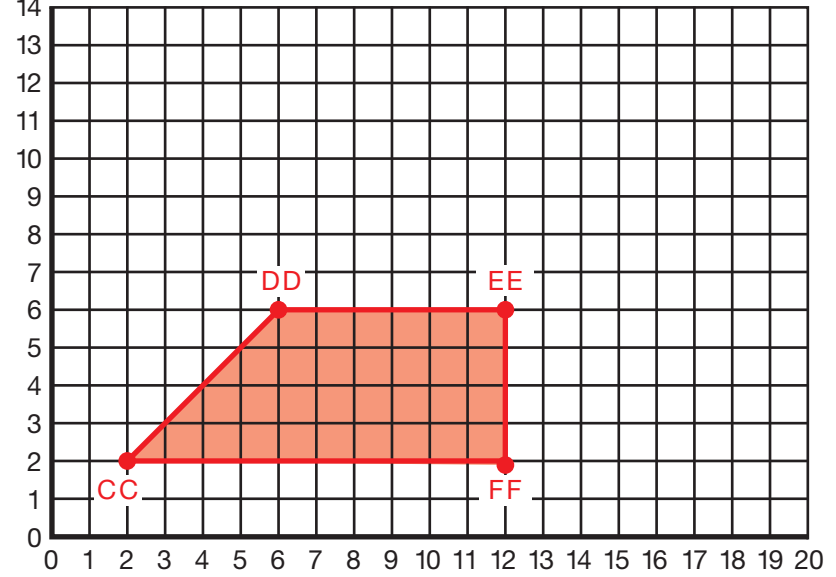
U (2, 2) V (7, 7) W (19, 7) X (14, 2) 14



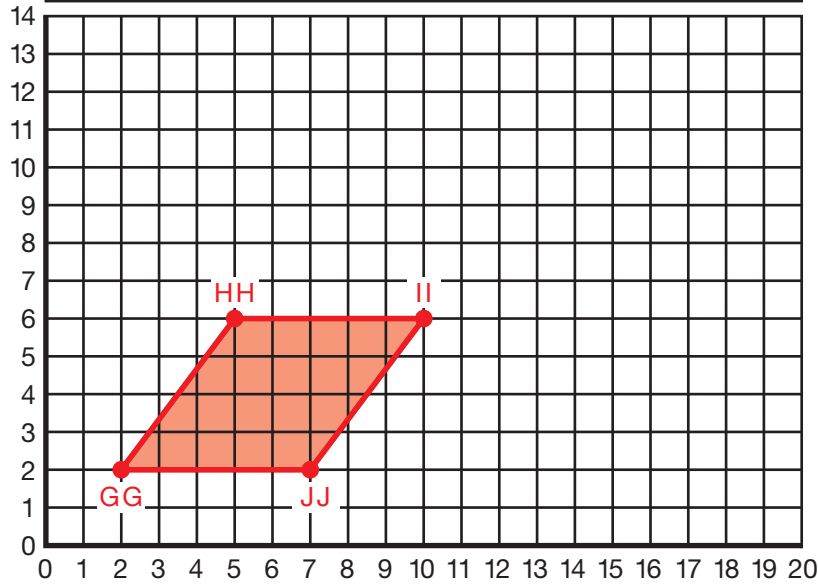
Y (2, 2) Z (2, 8) AA (12, 8) BB (12, 2) 15



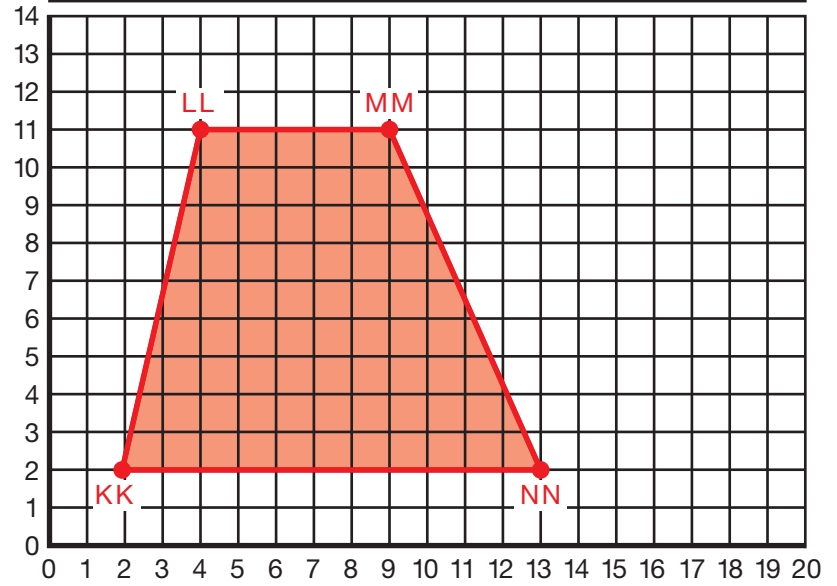
CC (2, 2) DD (6, 6) EE (12, 6) FF (12, 2) 16



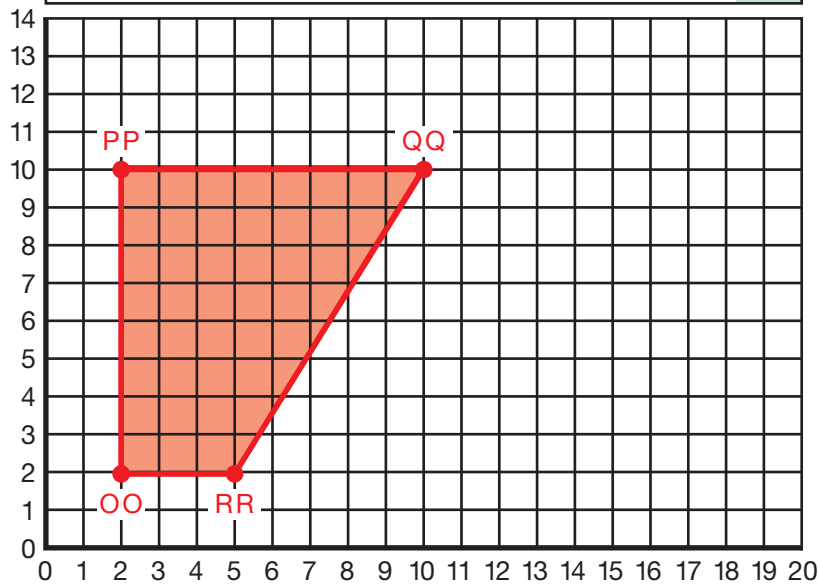
GG (2, 2) HH (5, 6) II (10, 6) JJ (7, 2) 17



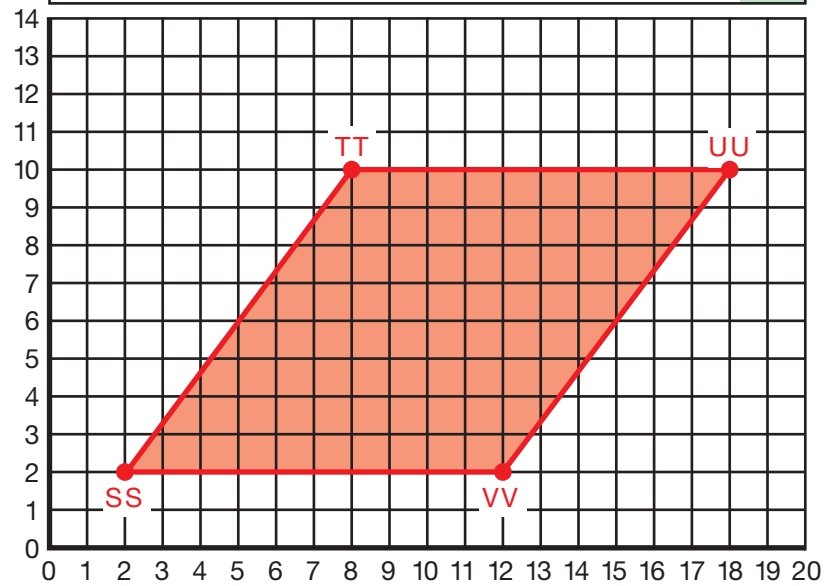
KK (2, 2) LL (4, 11) MM (9, 11) NN (13, 2) 18



OO (2, 2) PP (2, 10) QQ (10, 10) RR (5, 2) 19



SS (2, 2) TT (8, 10) UU (18, 10) VV (12, 2) 20



Louis Sorts Triangles

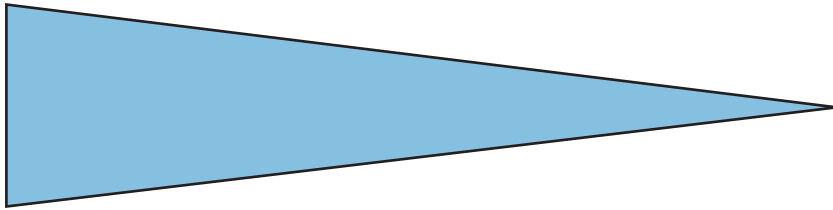
1. Louis started to sort some triangles on his sorting board. Use the cards in the Triangle Sort Cards section and Louis's Sorting Board to continue to sort the triangles. Attach the cards to the sorting board.
 - A. What are the properties of all the shapes in Box B? Label the box on the sorting board.
 - B. What are the properties of all the shapes in Box A? Label the box on the sorting board.
2. What is an appropriate classification for all the shapes in Box A?
3. Sketch a new shape that can only be classified with the shapes in Box A. Label it Shape Z and attach it to the appropriate section of the sorting board
4. Is there one way to classify or name all the shapes in Box B?
5. Sketch a new shape that can only be classified with the shapes in Box B. Label it Shape Y and attach it to the appropriate section of the sorting boarding.
6. Which triangles cannot be classified in Box A or Box B? Why?

7. Sketch a new triangle that cannot be classified in Box A or Box B. Label it Shape X and attach it to the appropriate section of the sorting board.

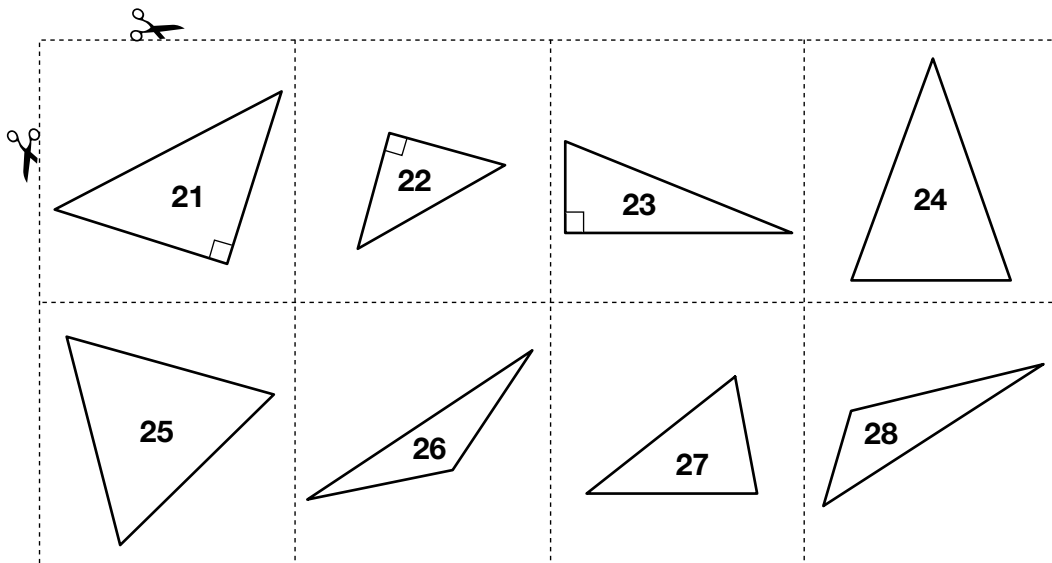
8. What is an appropriate name for all the shapes that can be classified in Box A and Box B?

9. Sketch a new shape that can be classified with shapes in Box A and Box B. Label it Shape W and attach it to the appropriate section of the sorting board.

10. Julie placed the shape below in the section that shows the overlap between Box A and Box B. Do you agree with Julie? Why or why not?

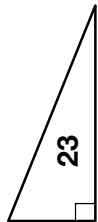


Triangle Sort Cards

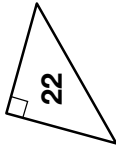
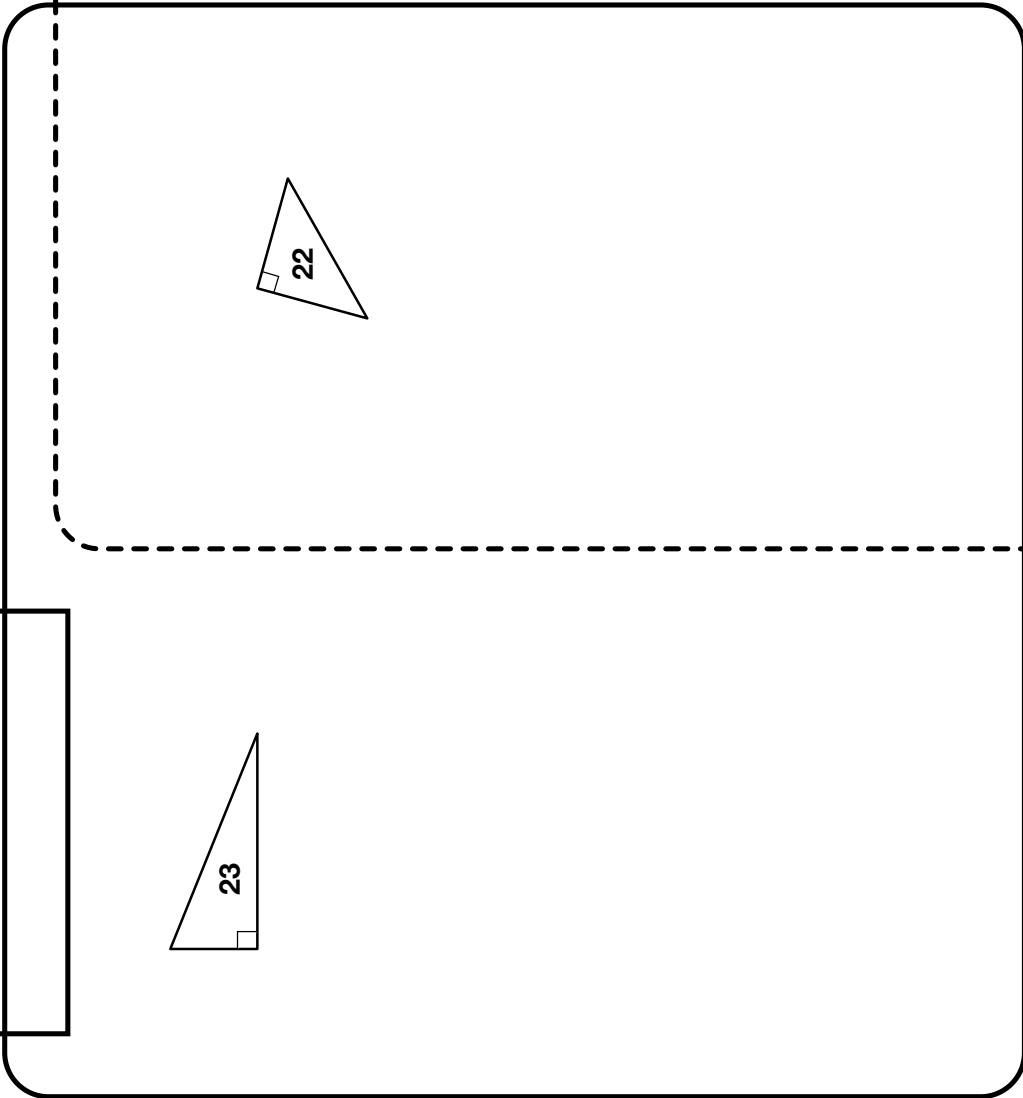


Name _____ Date _____

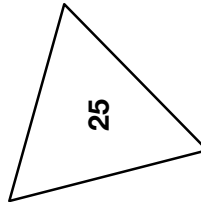
Box A



Louis's Sorting Board



Box B



Name _____ Date _____

**Louis Sorts Triangles
Feedback Box**

	Expectation	Check In	Comments
Identify and describe the properties two-dimensional shapes	E4		
Classify two-dimensional shapes in a hierarchy based on properties.	E5		
Justify conclusions using geometric properties.	E7		

Midterm Test

Part 1

Solve each problem without a calculator. Use the *Additions Strategies Menu*, *Subtraction Strategies Menu*, and the *Multidigit Multiplication Strategies Menu* in the *Student Guide* Reference section.

1. Solve the followings problems using two different methods.

First Method	Second Method
A. $6010 - 5971 =$	
B. $3694 + 8539 =$	
C. $626 \times 7 =$	
D. $74 \times 47 =$	

- E. Show or tell how you can use estimation to make sure your answer to Question 1D is reasonable.

2. Jacob and Frank needed to solve 65×34 .

A. Jacob started the problem this way. Finish it using his method.

$$\begin{array}{r} 65 \\ \times 34 \\ \hline 1800 \\ 240 \end{array}$$

B. Show where Jacob got 1800 and 240.

C. Frank started to use a rectangle to solve the same problem. Complete his strategy by filling in the blanks.

60	5
<div style="display: flex; align-items: center; justify-content: center;"> <div style="width: 20px; border-bottom: 1px solid black; margin-right: 10px;"></div> <div style="flex-grow: 1; border: 1px solid black; padding: 10px; text-align: center;"> $\underline{\quad\quad} \times 60 = \underline{\quad\quad}$ </div> </div>	<div style="display: flex; align-items: center; justify-content: center;"> <div style="width: 20px; border-bottom: 1px solid black; margin-right: 10px;"></div> <div style="flex-grow: 1; border: 1px solid black; padding: 10px; text-align: center;"> $\underline{\quad\quad} \times \underline{\quad\quad} = \underline{\quad\quad}$ </div> </div>
4	
<div style="display: flex; align-items: center; justify-content: center;"> <div style="width: 20px; border-bottom: 1px solid black; margin-right: 10px;"></div> <div style="flex-grow: 1; border: 1px solid black; padding: 10px; text-align: center;"> $\underline{\quad\quad} \times \underline{\quad\quad} = \underline{\quad\quad}$ </div> </div>	<div style="display: flex; align-items: center; justify-content: center;"> <div style="width: 20px; border-bottom: 1px solid black; margin-right: 10px;"></div> <div style="flex-grow: 1; border: 1px solid black; padding: 10px; text-align: center;"> $4 \times \underline{\quad\quad} = \underline{\quad\quad}$ </div> </div>

D. Compare Frank's and Jacob's methods. How are they alike? How are they different?

School Play

3. Nine hundred nine people attended the school play on Friday night and 893 people saw it on Saturday night.
- A. How many people saw the play on both nights?
- B. Show or tell how to solve the problem using mental math.
4. The school sold tickets for the play. Tickets for each adult cost \$4.00, tickets for students cost \$2.00. Preschoolers were able to attend the play free of charge. On Friday night, 682 tickets were sold to adults and 203 tickets were sold to students.
- A. How many preschoolers attended the play on Friday night?
- B. How much money did the school earn from ticket sales on Friday night?
5. On Saturday night the school earned \$3248.00 and 893 people attended. They sold 746 adult tickets and there were 15 preschoolers who attended free of charge.
- A. How many students attended the play on Saturday night?
- B. How much money did the school earn from ticket sales to students?

Part 2

You may use any of the tools you use in class. For example, you may use a ruler, calculator, fraction circle pieces, and pages in the *Student Guide Reference* section.

- 6. Mrs. Wells’s classroom collected data on the number of buttons on their clothing. Show or tell how to find the median number of buttons in each group.
 - A. In one group Jerome had 4, Grace had 0, and Ana has 3 buttons.

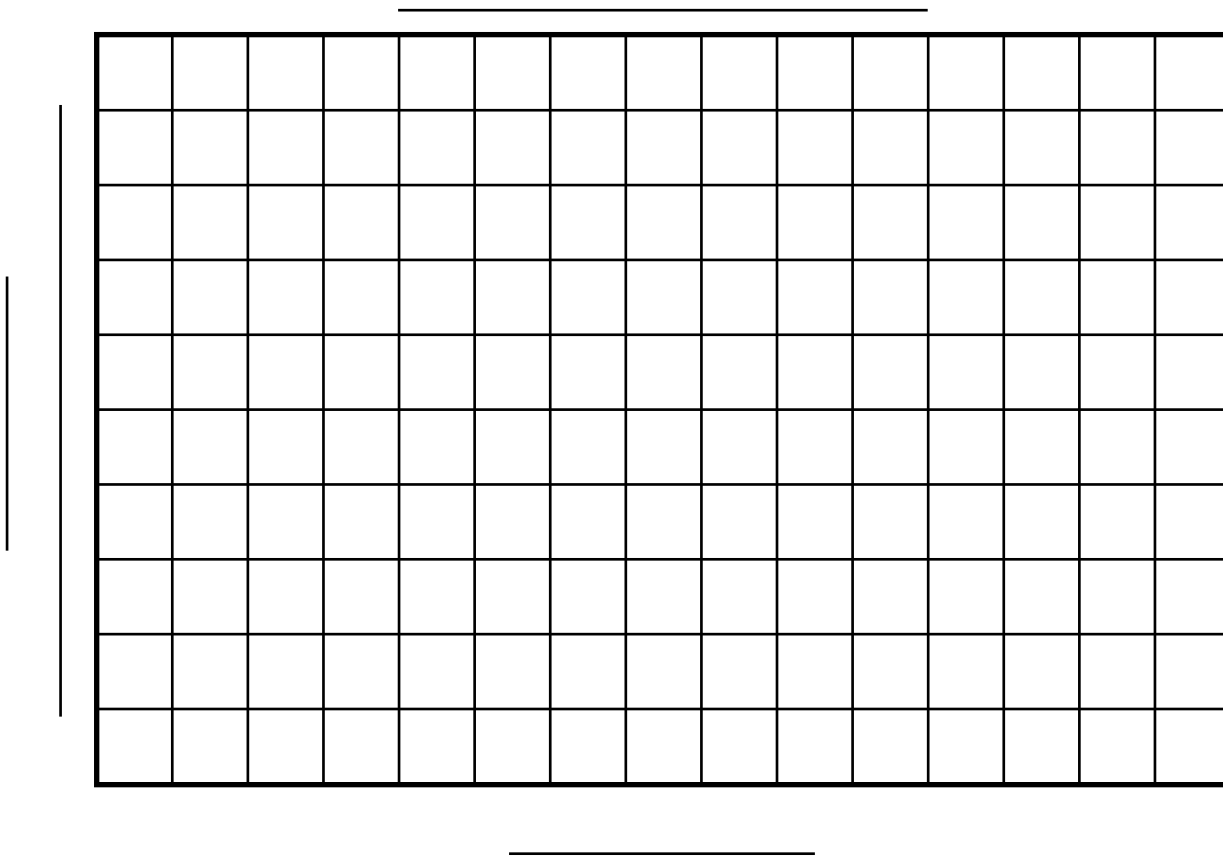
 - B. In a group with six students, the number of buttons for each student was 7, 2, 5, 4, 2, and 0 buttons.

- 7. Here are the data for Mrs. Wells’s whole class.

Number of Buttons

<i>B</i> Buttons	<i>N</i> Number of Students	
	Tallies	Total
0		9
1		5
2		3
3		3
4		1
5		2
6		0
7		1
8		0
9		3

A. Make a graph of the data.

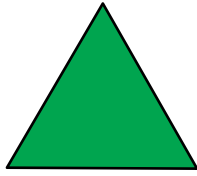


B. How many students were in Mrs. Wells's room when the data were gathered?

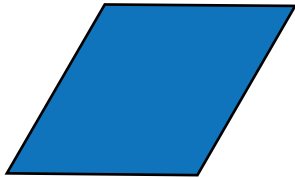
C. What was the most common number (mode) of buttons on this day?

D. Mrs. Wells's class collected the data again on the same day after they put on their coats for recess. Mrs. Wells noticed that most students had buttons on their coats. Predict how you think the new graph will look. Where will the tallest bars be? Will the bars be taller or shorter than the first graph? Explain your thinking.

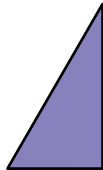
The TIMS Candy Company is selling boxes of candy. The candy is boxed in triangular-shaped boxes. Each flavor of candy is in a different shape.



The Chocolate Mint candy is a large triangle.



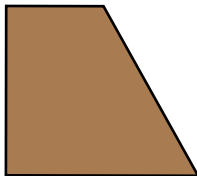
The Blueberry Crème is a rhombus and is twice as big as the Chocolate Mint.



The Raspberry Crème is a right triangle and is half as big as the Chocolate Mint.



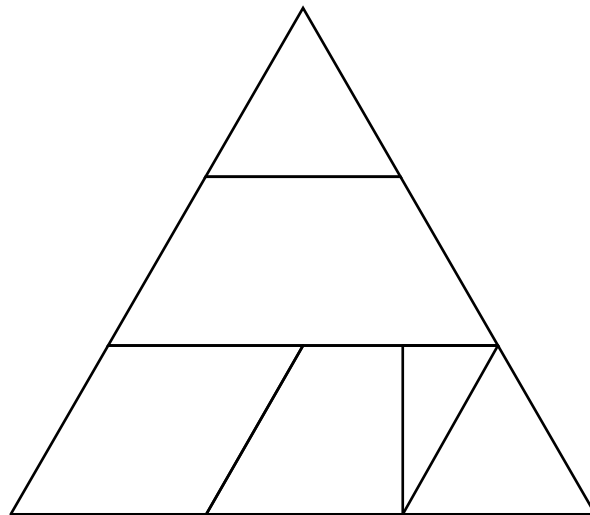
The Nut Cluster is the largest candy in the box. It is a trapezoid and is three times as large as the Chocolate Mint.



The Cherry Crème is a rhombus that is equal in size to the Chocolate Mint plus the Raspberry Crème.

The cost for each piece of candy is based on its size. The Chocolate Mint costs \$1.00, so the Blueberry Crème is \$2.00.

8. **A.** The cost of a box of candy is based on its size. The total cost of the box is the total cost of the pieces of candy in the box. The Sampler Box is shown here. Find the cost of the Sampler Box.



Sampler Box

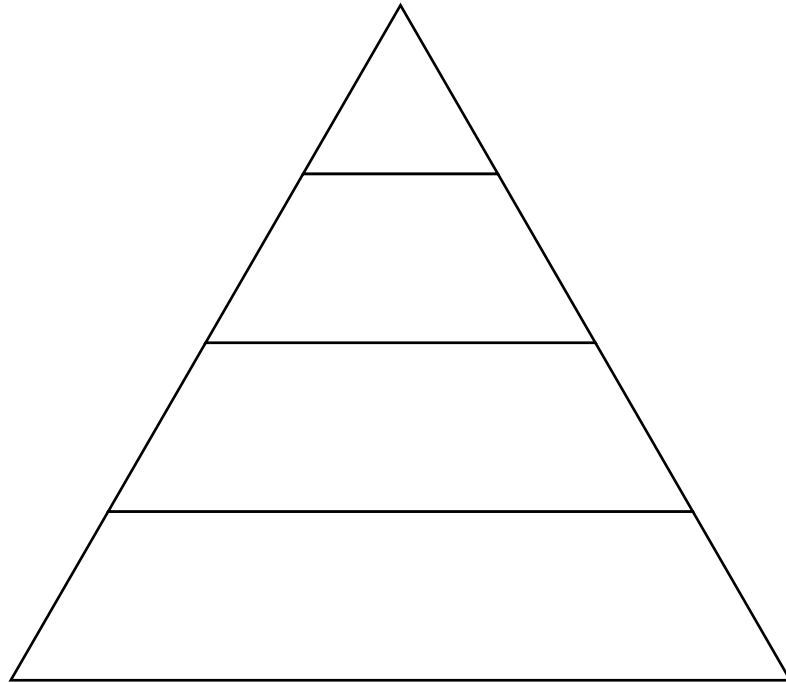
- B.** What fraction of the Sampler Box is the Nut Cluster?
How did you decide?

9. **A.** Nila wants to buy a Sampler Box with 2 Nut Clusters and 3 Chocolate Mints. Write a ratio to show the relationship between the number of Nut Clusters and the total number of candies in the box.

- B.** Write a ratio to show the relationship between the number of Chocolate Mints and the number of Nut Clusters in Nila's box.

- C.** The ratio for the number of Chocolate Mints to the total numbers of candies in the box is $\frac{3 \text{ Chocolate Mints}}{5 \text{ pieces of candy}}$. Write three equivalent ratios.

10. The Family Box of candy has four rows of candy rather than three. The candy is packed in a triangular-shaped box.
- A. Draw a picture of the candy in your Family Box.



Family Box

- B. Find the cost of each row in your Family Box. Show your work.

- C. Find the total cost of the Family Box. Explain how you solved this problem.

11. Complete the number sentences:

A. $\frac{2}{3} = \frac{?}{18}$

B. $\frac{7}{8} = \frac{?}{24}$

C. $\frac{2}{6} = \frac{7}{?}$

12. Solve each problem:

A. $\frac{7}{8} - \frac{1}{2} =$

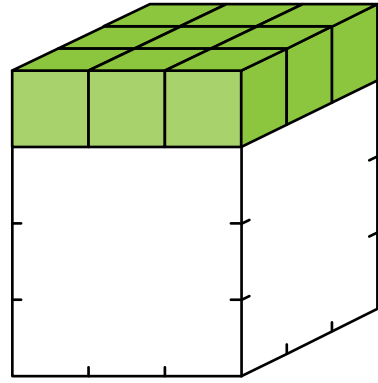
B. $\frac{3}{4} + \frac{1}{12} =$

C. $1 - \frac{3}{5} =$

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

E. Show or tell how you solved Question 12D.

13. A. Lee Yah found a bunch of centimeter cubes. She stacked the cubes to make a rectangular prism. What is the volume of her shape?



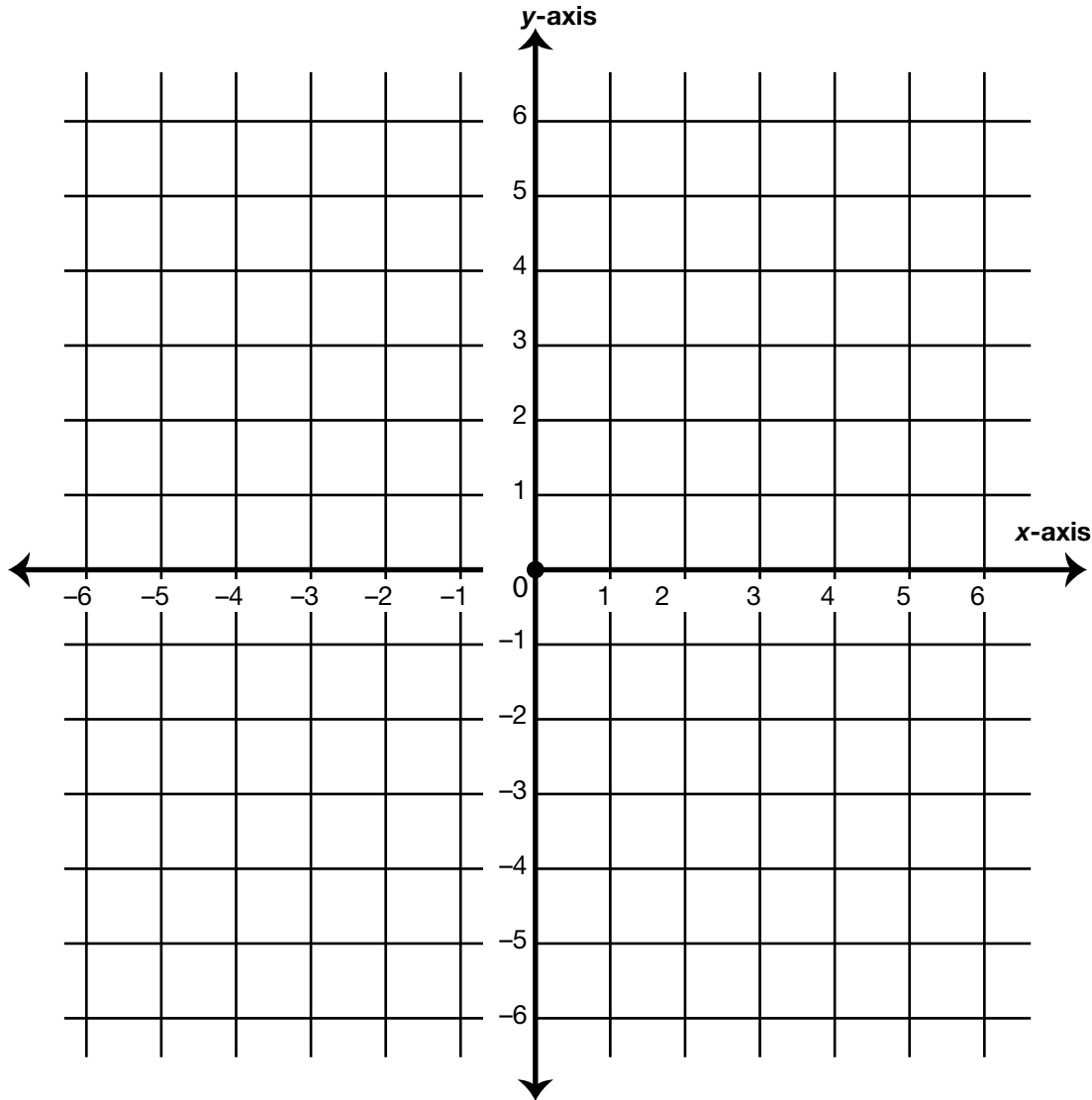
- B. Show or tell how you found your answer.

14. Lee Yah has 42 square centimeter cubes. She wants to build a rectangular prism using all the cubes. Sketch at least two different rectangular prisms Lee Yah could make. Label the length, width and height in each of your drawings.

15. A. Plot and draw Shape ABCD and Shape WXYZ on the coordinate grid.

A (-4, -4) B (-1, 1) C (6, 1) D (3, -4)

W (-4, 6) X (5, 6) Y (5, 3) Z (-4, 3)



B. Name the shape you made with points ABCD and describe its properties.

C. Can both Shape ABCD and Shape WXYZ be classified as parallelograms? Why or why not?

D. Is a square a rectangle? Why or why not?

Name _____ Date _____

**Mid-Year Test
Feedback Box**

Yes ...

Yes, but ...

No, but ...

No ...

<p>MPE1. Know the problem. I read the problem carefully. I know the questions to answer and what information is important. (Q# 3–5, 8–10, 13–15)</p>				
<p>MPE2. Find a strategy. I choose good tools and an efficient strategy for solving the problem. (Q# 3–5, 8–10, 13–14)</p>				
<p>MPE3. Check for reasonableness. I look back at my solution to see if my answer makes sense. If it does not, I try again. (Q# 1E)</p>				
<p>MPE5. Show my work. I show or tell how I arrived at my answer so someone else can understand my thinking. (Q# 2D, 3B, 7D, 8B, 10B–C, 12E, 13B)</p>				
<p>MPE6. Use labels. I use labels to show what numbers mean. (Q# 3–5, 8A, 9A–C, 10B–C, 13A, 14)</p>				