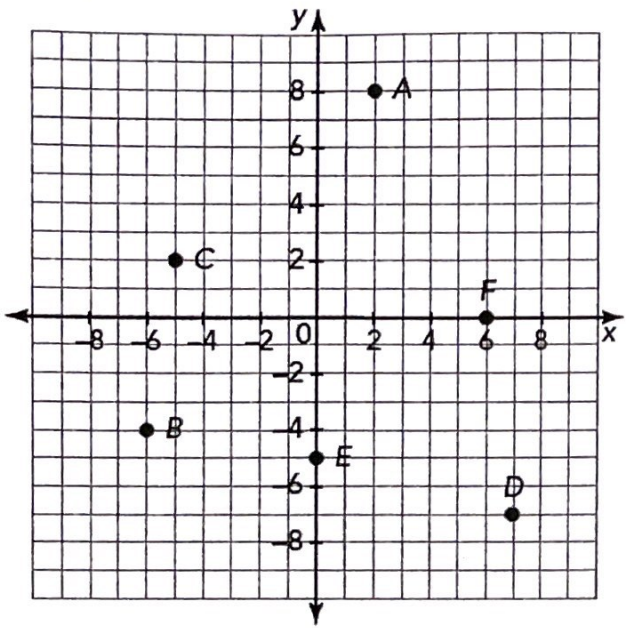
Name _____

Study Guide The Four Quadrants

Due Date _____

1 Consider points *A* to *F* shown on the coordinate plane.



Enter a number in each box to identify the ordered pair associated with the point.

Point	Ordered Pair
A	(2 , 8)
B	(-6 , -4)
C	(-5 , 2)
D	(7 , -7)
E	(0 , -5)
F	(6 , 0)

2 Consider the points A (10,-1), B (-3, -5), C (-2, 8), and D (13, 15).

Part A

Enter a number in each box to identify the coordinates of points reflected across the *x*-axis.

Point		Coordinates	
A	A′(	10	1)
B	B′(	-3	5)
C	C′(	-2	-8)
D	D′(	13	-15)

Part B

What is different in the coordinates for the original point and the reflected point?

In the reflected point the y-coordinate is opposite when reflected across the x-axis

---

Part C

Is *A*′(-7, 4) a reflection across the *x*-axis of *A* (7, 4)? Explain your reasoning.

No. The y-coordinate should be opposite not the x-coordinate. This is a reflection across the y-axis

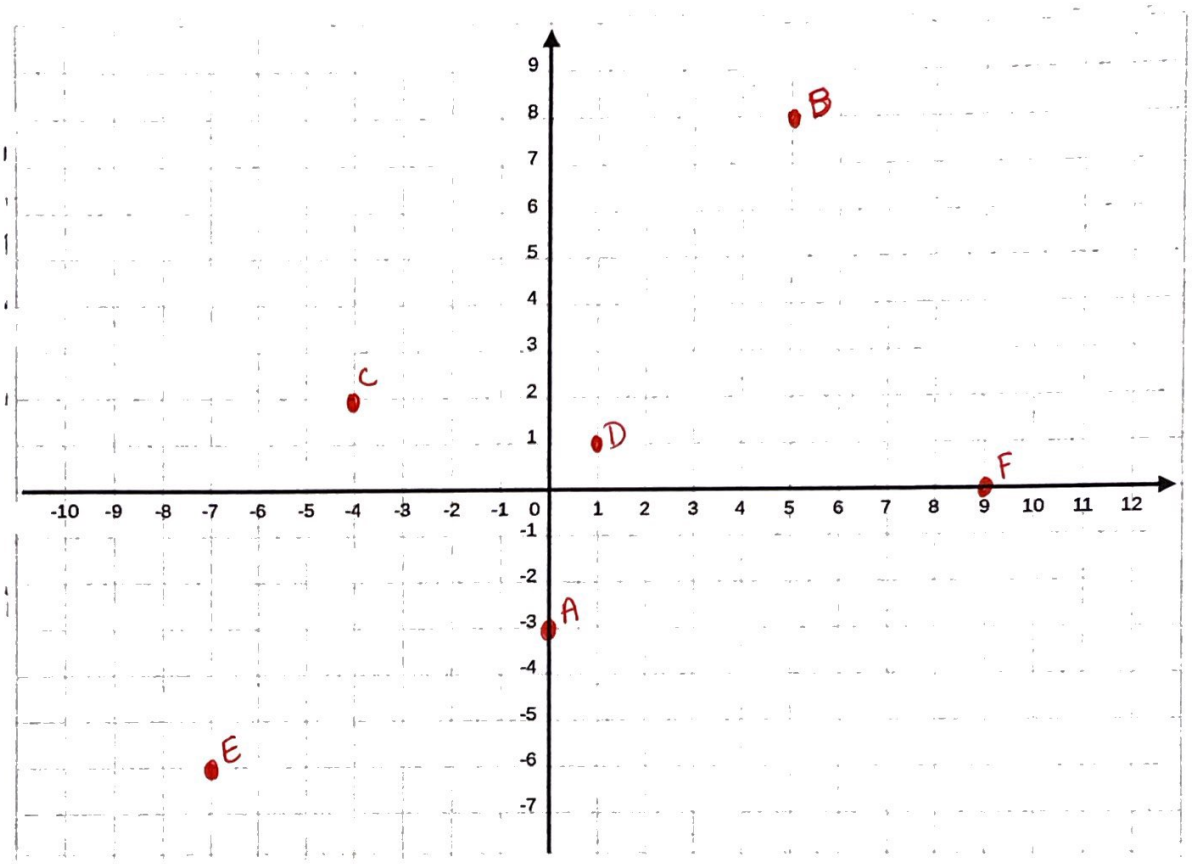
---

3 Identify the quadrant for each ordered pair.

	Q1	Q2	Q3	Q4
$(-16, -13)$			✓	
$(-5.6, 4.7)$		✓		
$(24, 24)$	✓			
'11 -0.5				✓

4 Plot the points on the coordinate plane. Label each point with its letter.

A (0, −3)
B (5, 8)
C (−4, 2)
D (1, 1)
E (−7, −6)
F (9, 0)



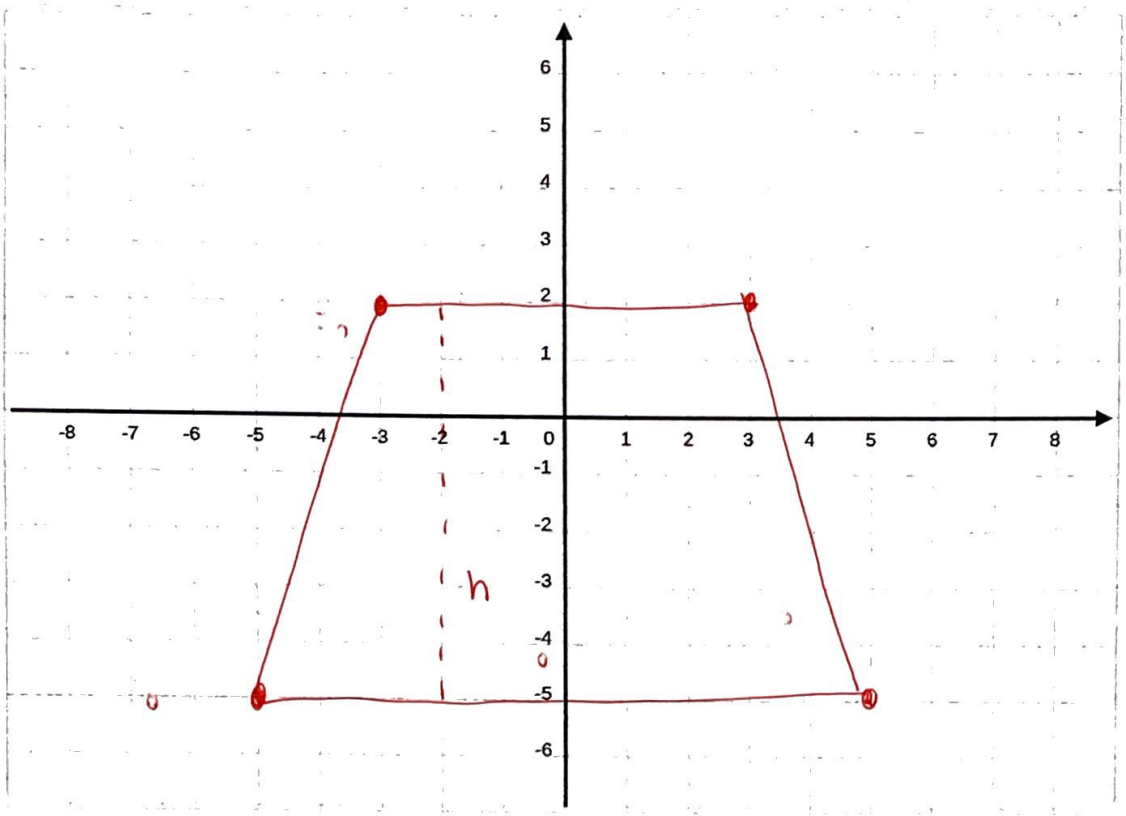
5 What is the distance between each pair of points? Show your work.

Pair of points	Distance
(-7, 2) and (5, 2)	12 units
(3, -1) and (3, -6)	5 units

$|-7| + |5|$

$|-6| - |-1|$

6 Plot and connect the points (-5, -5), (-3, 2), (3, 2) and (5, -5) on the coordinate plane.



7 **Part A** Name the figure that you drew in Q6.

Trapezoid

Part B Determine the height of the quadrilateral.

7 units

Part C Determine the area of the quadrilateral.

56 square units

$\frac{1}{2} \cdot 7 (6 + 10)$

$\frac{1}{2} \cdot 7 \cdot 16$

$8 \cdot 7$

56

8 A free diver dives into the ocean at a rate of 1.24 feet per second.

Part A

Complete the table to show how deep the diver will be after each given time. Since the diver is diving below the surface of the ocean, the depths will be defined as negative numbers to represent "below sea level."

Time (seconds)	Depth (feet)
10	-12.4
30	-37.2
60	-74.4
100	-124

Part B

What quantities are changing in this situation?

Time & Depth

Part C

Which quantity is Independent? Which quantity is Dependent?

Independent: Time

Dependent: Depth

Part D

If *d* represents the depth and *t* represents the time, write an equation to represent this problem situation. Since the diver is diving below the surface of the ocean, the depths will be defined as negative numbers to represent "below sea level."

$d = -1.24t$

Part E

Imagine you plotted the points in the table above. Does it make sense in this situation to draw a line through the points you plotted or not? Explain your answer.

Yes. You can have partial time (sec) and depth (ft) so all values would make sense.