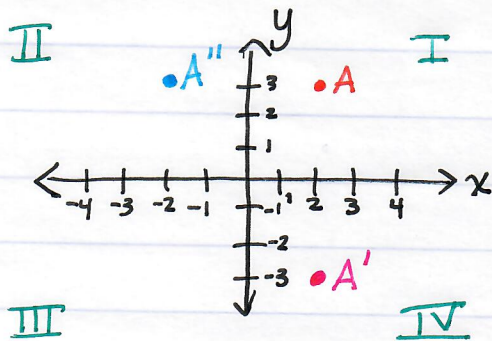


REFLECTIONS AND DISTANCE ON COORD. PLANE

DEF.

REFLECTION: A MIRROR IMAGE OF AN OBJECT THAT HAS BEEN "FLIPPED OVER" AN AXIS.



$A(2, 3)$

ORIGINAL POINT

(A PRIME)

$A'(2, -3)$

REFLECT OVER X (X → SAME, Y → OPPOSITE)

(A DOUBLE PRIME)

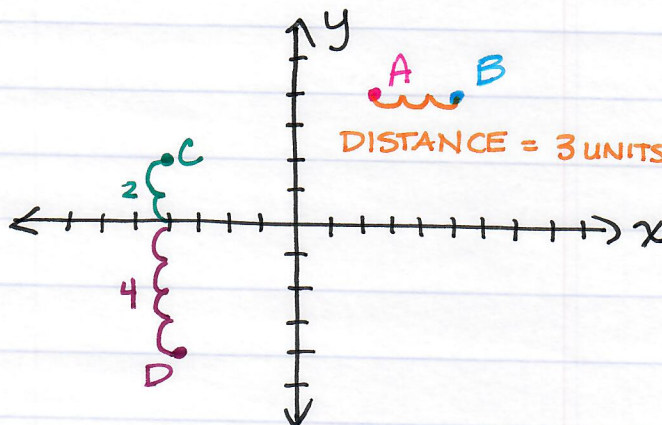
$A''(-2, 3)$

REFLECT OVER Y (X → OPPOSITE, Y → SAME)

DISTANCE

$C(-4, 2)$

$D(-4, -4)$



$A(2, 4)$

$B(5, 4)$

IF 2 POINTS IN SAME QUADRANT, SUBTRACT THE DIFFERENT COORDINATES (ABS VALUE)

IF 2 POINTS IN DIFFERENT QUADRANT, ADD ABS. VALUE OF DIFF. COORD.

Polygon Reflections on the Coordinate Plane

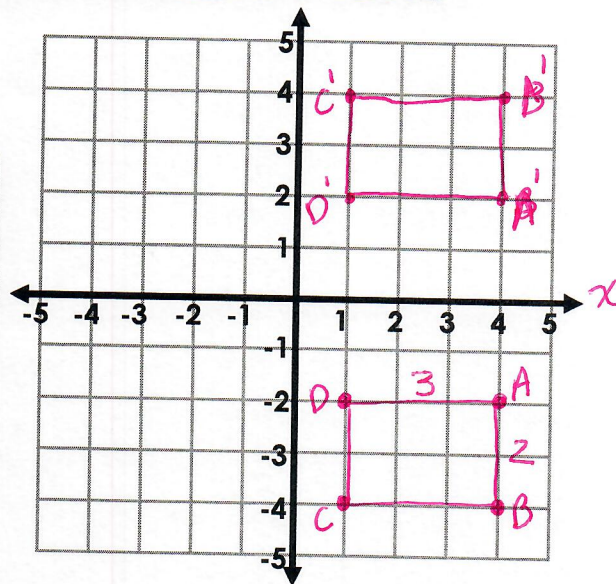
1a. Plot the following points on the coordinate plane, connecting each point to make a closed polygon. Then, reflect each point over the x-axis.

1b. What polygon did you create?
RECTANGLE

1c. What is the perimeter of the original polygon?
10 units

1d. What is the area of the original polygon?
6 units²

Original Coordinates	Reflected over the x-axis
A (4, -2)	(4, 2)
B (4, -4)	(4, 4)
C (1, -4)	(1, 4)
D (1, -2)	(1, 2)



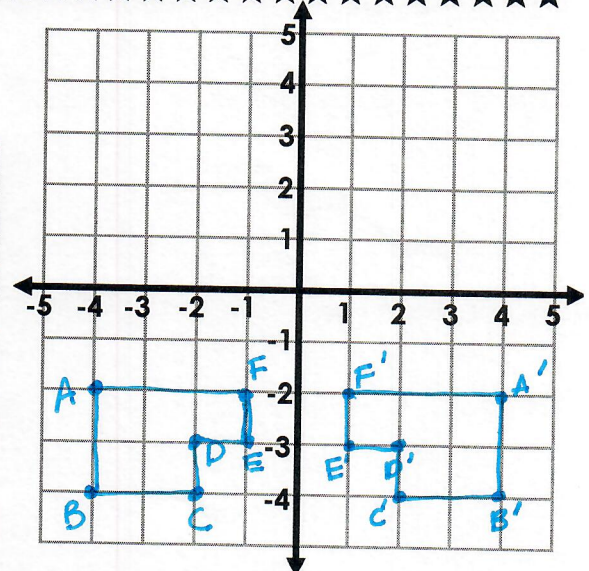
2a. Plot the following points on the coordinate plane, connecting each point to make a closed polygon. Then, reflect each point over the y-axis.

2b. What polygon did you create?
COMPOSITE FIGURE

2c. What is the perimeter of the original polygon?
10 units

2d. What is the area of the original polygon?
5 units²

Original Coordinates	Reflected over the y-axis
A (-4, -2)	(4, -2)
B (-4, -4)	(4, -4)
C (-2, -4)	(2, -4)
D (-2, -3)	(2, -3)
E (-1, -3)	(1, -3)
F (-1, -2)	(1, -2)



3a. Plot the following points on the coordinate plane, connecting each point to make a closed polygon. Then, reflect each point over the y-axis. Then, reflect each reflected point over the x-axis.

3b. What polygon did you create?

Original Coordinates	Reflected over the y-axis	Reflected over the x-axis
A (5, 4)		
B (3.5, 1)		
C (1, 1)		
D (2.5, 4)		

