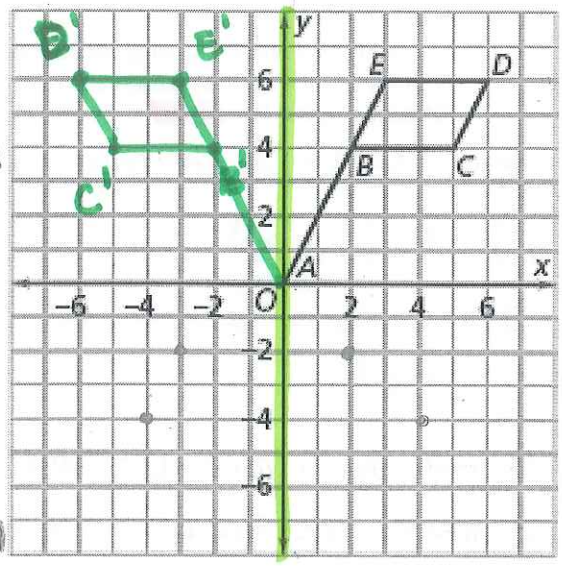
Name ..... Date ..... Class .....

Labsheet 3.1 Reflection

A. Complete the table showing coordinates of points *A–E* and their images under a reflection in the y-axis



(2, -2)
(-2, -2)
(-4, -4)
(-4, 4)
(4, 4)

① Rule for Reflection over the y axis:
$(x, y) \rightarrow (-x, y)$

② Yes, this rule will work for all Quadrants

③ a. A is unmoved - any point on the y-axis will be unmoved

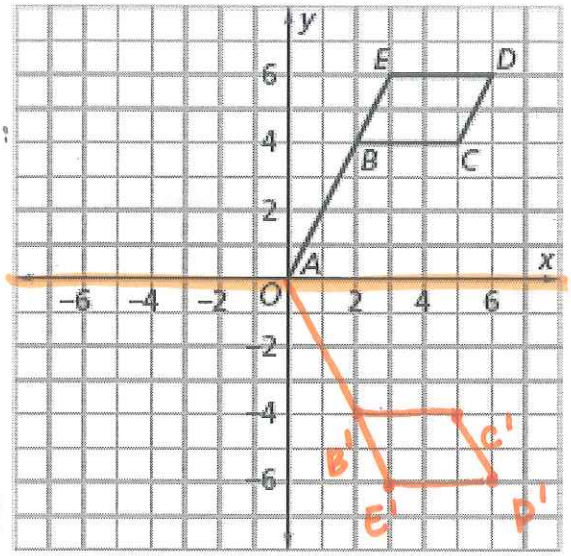
b. Yes, the figure is symmetrical

Point	A	B	C	D	E
Original Coordinates	(0, 0)	(2, 4)	(5,4)	(6,6)	(3,6)
Coordinates After a Reflection	(0,0)	(-2,4)	(-5,4)	(-6,6)	(-3,6)

X: change the sign / opposite

Y: stays the same

B. Complete the table showing coordinates of points *A–E* and their images under a reflection in the x-axis



① Rule for Reflection over the x axis:
$(x, y) \rightarrow (x, -y)$

② Yes, this rule will work for all Quadrants.

③ a. A is unmoved - any point on the x-axis will be unmoved

b. Yes, the figure is symmetrical

Point	A	B	C	D	E
Original Coordinates	(0, 0)	(2, 4)	(5,4)	(6,6)	(3,6)
Coordinates After a Reflection	(0,0)	(2,-4)	(5,-4)	(6,-6)	(3,-6)

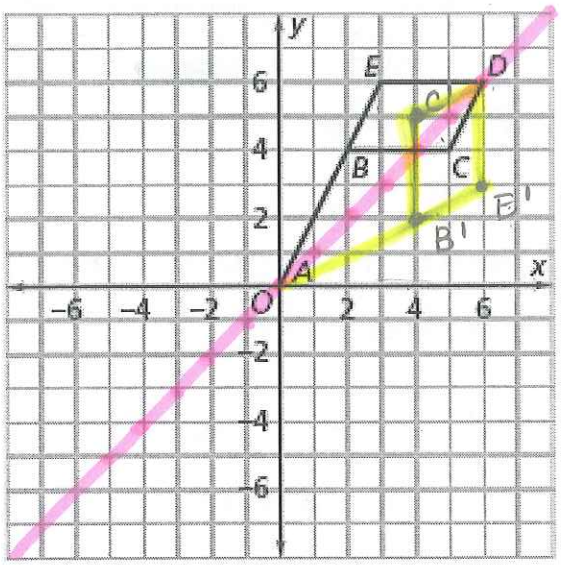
X: Stays the Same

Y: opposite/ change the sign

Name ..... Date ..... Class .....

Labsheet 3.1 Reflection

C. Complete the table showing coordinates of points *A–E* and their images under a reflection in the line $y = x$



① Rule for Reflection over $y=x$:
$(x, y) \rightarrow (y, x)$

② Yes, this will work in all Quadrants

③ a. Yes, A & D are unmoved - all points on line $y=x$ would be unmoved.

b. Yes, symmetrical

Point	A	B	C	D	E
Original Coordinates	(0, 0)	(2, 4)	(5,4)	(6,6)	(3,6)
Coordinates After a Reflection	(0,0	(4,2)	(4,5)	(6,6)	(6,3)

X becomes Y
Y becomes X

★ Reflection will be in Quadrant I