GRAPHIC ORGANIZER · SEQUENCES OF RIGID MOTIONS

Translations: Slide It

Translations on and off the coordinate plane

Name _____

Period _____

Date _____

Essential question: How can you describe a slide so exactly that anyone could repeat it, and what stays the same when a figure slides?

$$(x, y) \rightarrow (x + a, y + b)$$

The number with x: a

Moves the figure left or right. This is the horizontal part.

a is positive: right. a is negative: left.

Left and right

The number with y: b

Moves the figure up or down. This is the vertical part.

b is positive: up. b is negative: down.

Up and down

What stays the same

Fill in each blank as we find it in class.

- Every point moves the _____ distance in the _____ direction.
- The image is _____ to the pre-image: same side lengths, same angle measures.
- Each side of the image is _____ to the matching side of the pre-image.

Toolkit

Fill in each blank. Keep this page out while you work.

In words	Coordinate rule	Try it: P(3, −2) goes to
right 4	(x, y) → (_____, _____)	P′_____
left 5 and up 2	(x, y) → (_____, _____)	P′_____
_____	(x, y) → (x − 3, y − 6)	P′_____
_____	(x, y) → (_____, _____)	P′(5, 5)

Say it in one sentence: A translation is a rigid motion because it keeps every _____ and every _____ the same.

My example Write one worked example from class.