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| **Transformations: KEEP SHEET** |
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| **Translations (slide):** * **Maintains the way the shape is facing, the shape, the size of the shape, the length of the sides, and the size of the angles.**
 | * Left (-) or Right (+) affects the x-value.
* Up (+) or Down (-) affects the y-value.
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| **Reflections (flip):** * **Flips the way the shape is facing. Maintains the shape, the size of the shape, the length of the sides, and the size of the angles.**
 | * Over the x-axis; (x, y) → (x, -y)
* Over the y-axis; (x, y) → (-x, y)
* Over the line y = x; (x, y) → (y, x)
* Over a given line; line will go through the coordinate.
	+ Example: y = 2 horizontal through the point (0, 2), all y-values on the line are equal to 2.
	+ Example: x = 2 horizontal through the point (2, 0), all x-values on the line are equal to 2.
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| **Rotations (turn):*** **Turns the way the shape is facing. Maintains the shape, the size of the shape, the length of the sides, and the size of the angles.**
 | * 90⁰ counterclockwise: (x, y) → (-y, x)
* 180⁰ clockwise/counterclockwise: (x, y) → (-x, -y)
* 270⁰ counter clockwise: (x, y) → (y, -x)
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| **Dilations (grow or shrink, resize):*** **Resizes the shape. Maintains the shape and the measure of corresponding angles, but changes the size of the shape and the length of the sides.**
 | * Scale Factor = n
* Rule: (n∙x, n∙y)
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| **Definitions** |
| **Congruent –** exact same measures. Congruent figures will have congruent corresponding angles, congruent corresponding sides, be the same shape, and be the same size.**Similar** – has congruent corresponding angle measures, proportional side lengths, the same shape, but a different size image.**Neither** – the angles DO NOT share the same measures. |