Name: _____

MATH 8: UNIT 7: TRANSFORMATIONS AND ANGLE RELATIONSHIPS

Students will use transformations in the forms of translation (move), reflection (flip image as in a mirror), rotation (spin), and dilation (expand or decrease size). Students will also use angle relationships with intersecting and parallel lines, combined with simple one-variable algebra. Finally, students will identify *similar* shapes. Similar means the same shape, with one of the images being bigger and the other smaller. *Useful text: SB24, SB14*

Section 1: Transformations.
Section 2: Angle relationships with intersecting and parallel lines, combined with simple one-variable algebraic equations. Similar shapes.

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Section 1: Transformations.

a. We'll practice transformations of triangles and polygons on a graph: translation (move), reflection (flip image as in a mirror), rotation (spin), and dilation (expand or decrease size).
b. We'll consider two congruent triangles on a graph, and use transformations to place one of the triangles on top of the other.
c. We'll consider two similar triangles on a graph (similar means the same shape, with one bigger than the other), and use transformations to re-size and place one on top of the other.

Section 2: Angle relationships with intersecting and parallel lines, combined with simple one-variable algebraic equations. Similar shapes.

a. We'll consider parallel lines intersected by another line (called a transversal). Vertical angles (across from each other with intersecting lines) are always of equal measure. Corresponding angles with parallel lines are always of equal measure. This means that if we know the measure of one angle, we can calculate the measures of the other seven angles. We'll practice.
b. We'll use basic algebra to work with the above idea to find the measures of angles.
c. We'll compare two triangles of known side measurement, and test to see if they are similar. If they are similar, we can multiple the sides of the smaller triangle with one number, and have the sides of the larger triangle. For example, if we have a triangle of sides 3, 4, 5 and another of sides 9, 12, 15, we know these two triangles are the same shape because the larger one is increased by a scale factor of 3 from the smaller one.