Geometry Transformation Unit Test Topics

The test will consist of 20 multiple choice questions .

Vocabulary: transformation, rigid transformation, isometry, reflection, rotation, translation, translation vector, line of symmetry, point of symmetry, composition of transformations, congruent figures, preserve orientation. Study graphic organizer.

- ❑ Use/interpret rule for reflection across an axis.
- ❑ Reflect a point, segment, or polygon across an axis or a different line (EX: y = -2 or y=x)
- ❑ Rotate a point, segment, or polygon around the origin or another given point. (you may use patty paper). Know the rule for rotating 180 degrees. Be able to rotate 90 or 270 clockwise or counterclockwise. Know that counter-clockwise is the "default" if not mentioned. Interpret degrees, direction, or rotation point from a graph. (Like Aussie activity from class.)
- ❑ Translate a point, segment, or polygon by a rule, by a combination of rules (see third graph from translation activity in notes), along a vector (EX: along <3,0>). Interpret a translation rule from a graph.
- ❑ Be able to "add" two vectors or translation rules to get one rule. EX: (x-3, y+2) then (x, y-7) would add to one rule (x-3, y-5).
- ❑ Know how many lines of symmetry are in a figure.
- ❑ Know that a reflection line (line of symmetry) makes 2 congruent figures, but "orientation is not preserved" when a figure is reflected (lifted off the paper, so to speak).

Nice to know:

You could be asked to reflect across a line, in a line, about a line. All mean the same.

You could be asked to translate along a vector, with a vector, under a rule, with a rule. All mean the same. $(x,y)\rightarrow(x-5,y+1)$ and (-5,1) and <-5,1> all mean move the figure to the left 5 and up 1.

You could be asked to rotate around a point, about a point. They mean the same.

Isometry is the same as rigid transformation. It usually refers to a rule for the transformation.

All isometries or rigid transformations yield congruent figures.

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