

Chapter 4 Test Prep

1. Translate a given figure in the coordinate plane (4 points)
 - a. $(x, y) \rightarrow (x + h, y + k)$
2. Write a rule (coordinate form AND vector form) that describes a translation (8 points)
3. Reflect a given figure in the coordinate plane in the lines... (4 points)
 - a. x-axis
 - i. $(x, y) \rightarrow (x, -y)$
 - b. y-axis
 - i. $(x, y) \rightarrow (-x, y)$
 - c. vertical and horizontal lines
 - i. use trace paper or the counting method
 - d. $y = x$
 - i. $(x, y) \rightarrow (y, x)$
 - e. $y = -x$
 - i. $(x, y) \rightarrow (-y, -x)$
4. Determine whether a figure has line symmetry (12 points)
 - a. If so, be able to draw ALL lines of symmetry in the figure
5. Rotate a given figure in the coordinate plane about the origin... (16 points)
 - a. 90°
 - i. $(x, y) \rightarrow (-y, x)$
 - b. 180°
 - i. $(x, y) \rightarrow (-x, -y)$
 - c. 270°
 - i. $(x, y) \rightarrow (y, -x)$
 - d. Remember, the rotation is COUNTERCLOCKWISE unless otherwise stated!
6. Determine whether a figure has rotational symmetry (12 points)
 - a. If so, be able to determine the SMALLEST angle of rotational symmetry the figure has
7. Congruence Transformations in the coordinate plane (8 points)
 - a. Use and describe translations/reflections/rotations to map one figure onto the other
8. Perform dilations in the coordinate plane with a given scale factor (6 points)
9. Similarity Transformations in the coordinate plane (8 points)
 - a. Use and describe dilations/translations/reflections/rotations to map one figure onto the other
10. Find the scale factor given a figure of a preimage and its image (4 points)
11. Find the length of an object's image or actual size given the scale factor (4 points)
12. Know which transformations are rigid motions (3 points)
13. Know which transformations are nonrigid motions (3 points)
14. Know that a reflection in two parallel lines results in a TRANSLATION (3 points)
15. Know that a reflection in two intersecting lines results in a ROTATION (3 points)

****You can use a sheet of trace paper on the quiz. I will provide it for you if you want to use it.**
YOU MAY NOT USE YOUR OWN TRACE PAPER!

****Remember to highlight your images! ☺**