

Name _____

points _____

CHAPTER 12 FINAL REVIEW SHEET

Section 1:

Isometry (def):

Isometries are also called _____ or _____

A reflection is a transformation across a line, called the _____, so that it is the _____ of each segment joining each point and its image.

Rules for reflections across the lines...			
x-axis	y-axis	$y = x$	$y = -x$
$(x, y) \rightarrow (\quad , \quad)$	$(x, y) \rightarrow (\quad , \quad)$	$(x, y) \rightarrow (\quad , \quad)$	$(x, y) \rightarrow (\quad , \quad)$

Section 2:

A translation is a transformation along a _____ such that each segment joining a point and its image has the _____ as the vector and is _____ to the vector

Vectors have horizontal components (h) and vertical components (k).

Rule for translations along vector $\langle h, k \rangle$: $(x, y) \rightarrow (\quad , \quad)$

Section 3:

A rotation is a transformation about a point P, called the _____, such that each point and its image are the _____ from P, and such that all angles with vertex P formed by a point and its image are _____.

Which is the default direction for rotations? In other words, unless otherwise stated, the direction of the rotation is always _____

Rules for rotations about the origin...		
90°	180°	270°
$(x, y) \rightarrow (\quad , \quad)$	$(x, y) \rightarrow (\quad , \quad)$	$(x, y) \rightarrow (\quad , \quad)$

A 90° rotation clockwise is the same as a _____ $^\circ$ rotation counterclockwise.

A 180° rotation clockwise is the same as a _____ $^\circ$ rotation counterclockwise.

A 270° rotation clockwise is the same as a _____ $^\circ$ rotation counterclockwise.

Section 4:

Composition of transformations:

Glide reflection (def):

Theorem: The composition of two reflections in two parallel lines is equivalent to a _____

Theorem: The composition of two reflections in intersecting lines is equivalent to a _____

→ The angle of rotation is _____ that of the angle of formed by the lines.

→ The center of rotation is the _____ of the two lines

Section 5 (only some of it...not all):

Symmetry (def):

Line symmetry (def):

Rotational symmetry (def):

The angle of rotational symmetry is the _____ angle which a figure can be rotated to be mapped onto itself.

Section 7:

Dilation (def):

The image and preimage after a dilation are said to be _____.

A dilation is also called a _____.

The scale factor, k , is the ratio of the lengths of the _____ to the length of its corresponding _____

Rule for dilations (under scale factor, k): $(x, y) \rightarrow (\quad , \quad)$

A negative value for k also represents a _____ by _____°