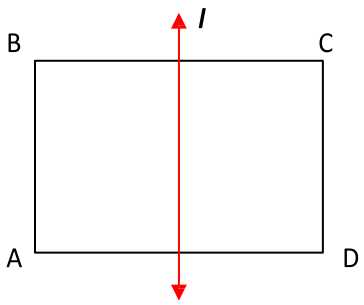
Math 1312
Section 2.6
Symmetry and Transformations

Definition:

A figure has **symmetry with respect to a line *l*** if for every point A on the figure, there is a second point B on the figure for which l is the _____ _____ of $\overline{AB}$.

Example 1:



Example 2: Draw a figure that has exactly one line of symmetry.

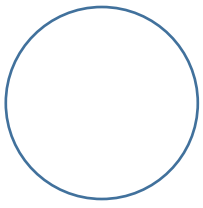
Example 3: Draw a figure that has 2 lines of symmetry.

Definition:

A figure has **symmetry with respect to point P** if for every point A on the figure, there is a second point C for which P is the midpoint of $\overline{AC}$

Example 4:

N



Definition:

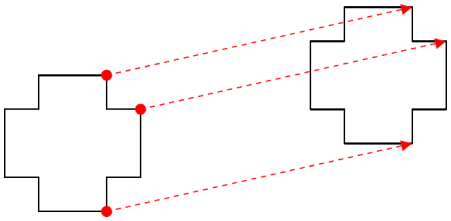
Two figures are _____ if one can be moved so that it exactly overlaps the other.

Transformation involves moving an object from its original position to a new position.

Types of transformations

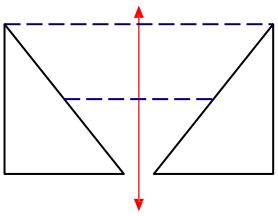
1. _____ involves "sliding" the object from one position to another.

Example 5:



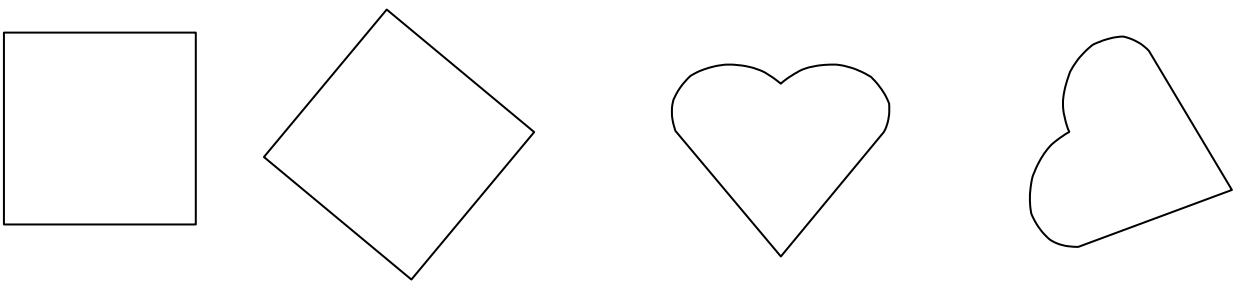
2. _____ involves "flipping" the object over a line called the line of reflection.

Example 6:



3. _____ involves "turning" the object about a point called the center of rotation.

Example 7:



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