Unit I VOCABULARY- Transformations and Symmetry

1) **Rigid Motion:** a transformation in which the object does not change size or shape. a transformation which preserves distance/side lengths and angle measures produces congruent figures. This is also known as an Isometry.

(1) **Translation:** transformation that moves points the same distance and direction along lines that are parallel to each other.

(2) **Rotation:** Moves points the same direction along concentric circles and through the same angle of rotation.

(3) **Reflection:** Moves points across a specified line so that the line is the perpendicular bisector of each line segment connecting corresponding pre-image and image points.

(2) **Orientation:** The way an object is pointing or angled

Parallel: Two lines in a plane that have the same slope and different y-intercepts. These lines never intersect.

Perpendicular: Two lines in a plane that have opposite reciprocal slopes. These lines meet at a right angle.

(3) **Perpendicular Bisector:** a line which cuts a line segment into two equal parts at 90°.

Rotational Symmetry: an object is turned around a center point a number of degrees between 0° and 360° and the object appears the same.

Reflectional Symmetry: a line is drawn to divide a shape so that each half is a mirror Image of the other.

(2) **Center of Rotation:** a point about which a plane figure is turned.

(2) **Concentric Circles:** Circles that have the same center and fit inside each other.

(2) **Angle of Rotation:** Measure of the amount that a figure is turned about a fixed point.

(1) **Corresponding:** point or parts that appear in the same place in two similar situations ⇒ points or parts that are in the same relative position.

(1) **Preimage:** The original object. This set of points is known as the DOMAIN.
(Start)

(1) **Image:** The object after the transformation. This set of points is known as the RANGE.
(end)

Regular Polygon: a shape that has sides that are all equal and interior angles that are all equal.