**Geometry Study Guide**

A **point** is pictured by a dot.

A **line segment** is a straight path between two points.

A **line** is a straight path that goes on forever in **both** directions.

A **ray** is a straight path that goes on forever in **one direction**.

**Parallel lines** are lines that never cross.

**Intersecting lines** are lines that cross over at a point.

**Perpendicular lines** are lines that intersect to form right angles.

An **angle** is formed by two rays connecting at a vertex. There are three types of angles: **acute, obtuse,** and **right.**

* An **acute angle** is less than 90⁰.
* A **right angle** is exactly 90⁰
* An **obtuse angle** is greater than 90⁰.

A **polygon** is a flat shape consisting of at least 3 straight sides. There are many types of polygons.

*Triangles*

* Triangles are polygons with three sides and three angles.

*Quadrilaterals*

* Quadrilaterals are polygons with four sides and four angles.
	+ **Square:** All sides are the same length. There are four right angles.
	+ **Rectangle:** Opposite sides are parallel and the same length; there are four right angles
	+ **Parallelogram:** two pairs of opposite parallel sides
	+ **Rhombus:** two pairs of parallel sides; all sides are the same length
	+ **Trapezoid:** only one pair of parallel sides

*Other Polygons*

 **Pentagon Hexagon Heptagon Octagon**

 **(5 sides) (6 sides) (7 sides) (8 sides)**

 **Nonagon Decagon**

 **(9 sides) (10 sides)**



**Congruent** figures are the same shape and size.

**Similar** figures are the same shape but might be different in size.

You can move a figure with a **translation, reflection,** or **rotation.**

* **Translation = slide**
* **Reflection = flip**
* **Rotation = turn**