Geometry Info Sheet #1

Basic Geometric Figures and Definitions

Definitions

Point: An exact position or location; it is not a "thing", but a place; it has no size at all and cannot ever be seen; while we often represent a point as a "dot" on a board or paper, a point cannot actually be drawn, since it has no dimensions (length, width, or height)

Figure: Also known as a **geometric figure**; any set of points

Line: A one-dimensional figure that has no thickness, no beginning, and no end; it is made up of an infinite series of points arranged in a "straight" formation, and from any given point on a line, the line extends forever in opposite directions; since a line has no thickness, it cannot actually be drawn or seen

Plane: A two-dimensional figure that, like a line, has no thickness; it is a flat surface that extends forever in all directions; since it has no thickness, a plane cannot be drawn or seen

Segment: Also known as a **line segment**; a portion of a line with two endpoints

Ray: A portion of a line with one endpoint, and extending forever in one direction

Endpoint: A point representing an end of a line segment or the end of a ray

Angle: The figure formed by two rays (sides) that share an endpoint (vertex)

Vertex: An endpoint shared by two rays or two line segments

An angle divides a plane into an **interior** region and an **exterior** region of the angle.

Two points on the same line are **collinear**.

Two points in the same plane, or two lines in the same plane, are **coplanar**.

Two geometric figures **intersect** if they have one or more points in common. The set of points that they have in common is called their **intersection**.

Two coplanar lines are **parallel** if they never intersect. A line and a plane are parallel if they never intersect. Two planes are parallel if they never intersect.

The mathematical symbol used to indicate that two figures are parallel is: ||

Skew Lines: Non-coplanar lines that do not intersect