~ GROOVY GEOMETRY ~
An Illustrated Glossary
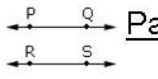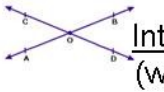(grouped by figures - not alphabetically!)

Points, Lines, & Rays

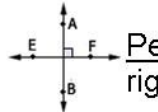**Point**: names a location on an object or in space. Symbol = ● A

Line: a straight path of points that goes on in both directions. It has no endpoints. Symbol = $\overleftrightarrow{AB}$

Line Segment: is part of a line. It has to endpoints. Symbol = $\overline{CD}$
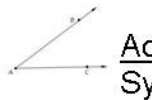
Ray: is part of a line. It has one endpoint and goes on and on in one direction. Symbol = $\overrightarrow{GH}$

Parallel Lines: two or more lines that lie in the same plane and do not ever intersect. Symbol = $\overleftrightarrow{PQ} \parallel \overleftrightarrow{RS}$

Intersecting Lines: lines that have one point in common (where they intersect). CD intersects AB at Point O.

Perpendicular Lines: two lines that intersect and form right angles. Symbol = $\overleftrightarrow{AB} \perp \overleftrightarrow{EF}$

Angles

Acute Angle: is less than 90º, and greater than 0º. Symbol = $\angle BAC$ or $\angle CAB$ or $\angle A$ (vertex)

Right Angle: is exactly 90º. Symbol = ∟

Obtuse Angle: is greater than 90º, and less than 180º.

Plane Figures (2D figures)
Triangles (3-sided figures)

Acute Triangle: all angles are acute (less than 90º)

**Equilateral Triangle**: all 3 sides are equal

Isosceles Triangle: 2 sides are equal

Obtuse Triangle: One angle is obtuse (greater than 90º but less than 180º)

Scalene Triangle: All 3 sides are different

Right Triangle: has 1 right angle

Quadrilaterals (4-sided figures)

Square: quadrilateral having all sides equal in length and forming right angles

Rectangle: 4-sided polygon with all right angles

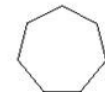**Parallelogram**: 4-sided polygon with two pairs of parallel sides

Rhombus: 4 sides all the same length (often called a diamond)

Trapezoid: 4-sided figure with one pair of parallel sides

Multi-sided Plane Figures (more than 4 sides)

Pentagon: 5-sided polygon

Hexagon: 6-sided polygon

Heptagon: 7-sided polygon

Octagon: 8-sided polygon

3-Dimensional Figures
(hollow or solid shapes with length, width, & height)

3-Dimensional Figures have the following:

Face - part of the shape that is flat or curved (a cube has 6)

Edge - the line where two faces meet (a cube has 12)

Vertex (vertices) (corners) - place where 3 or more edges meet (this pyramid has 4)
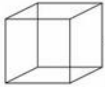

3-Dimensional Shapes

Sphere: 0 flat faces, 0 straight edges, 1 curved face.

Cone: 1curved face, 1 flat face that is a circle

Cube: 6 flat square faces, 12 straight edges, and 8 corners (vertices)

Cylinder: 1 curved face, and 2 flat circular faces

Triangular Prism: 5 faces, 9 edges, 6 vertices

Square-based Pyramid: 5 faces, 8 edges, 5 vertices