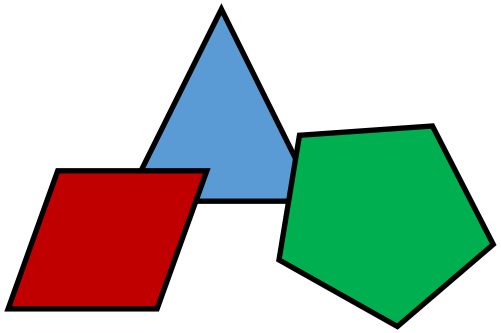
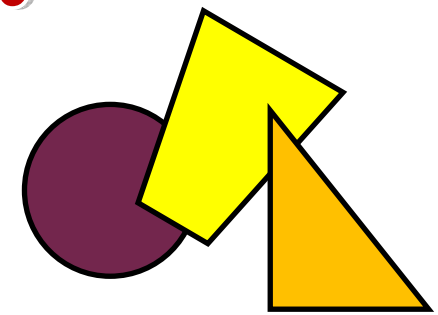
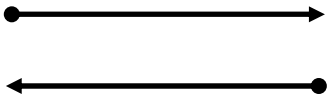
Geometry Study Guide



SOL 4.10 a,b; 4.11 a,b & 4.12 a,b

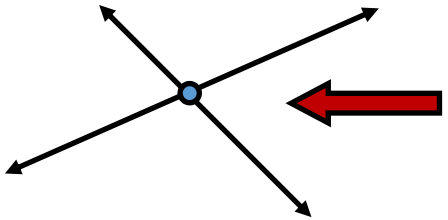
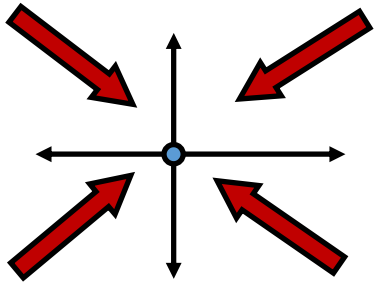


Lines and Angles

Line		A straight path that goes on without end in both directions.
Line Segment		A part of a line that has two endpoints.
Ray		A straight path that has one endpoint and goes on without end in the other direction.
Angle		An angle is 2 rays that share an endpoint (**vertex**).
Point		An exact location in space.

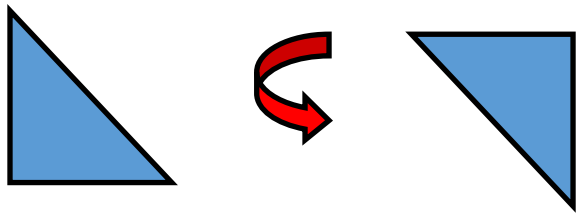
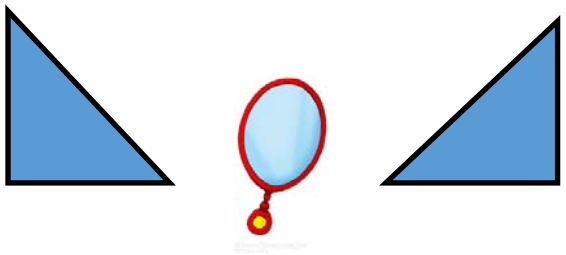
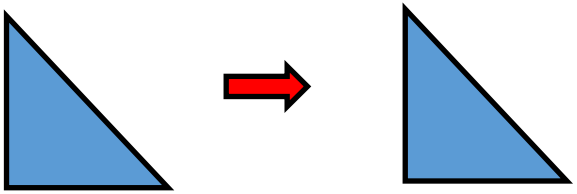
Three letters are used to name the angle

Line Representations

Intersecting		Lines that have <u>one</u> point in common
Parallel		Lines that lay in the same place and <u>never</u> intersect. They stay the <u>same distance apart</u>.
Perpendicular		Lines that are special inter-secting lines that form <u>right angles</u> (90 º) .

Transformation

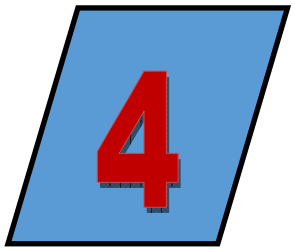
All second shapes that have completed the transformation are congruent (same size).

Rotation		Formed by <u>turning</u> the shape on a point
Reflection		Formed by <u>flipping</u> a shape over a line (the line of reflection)
Translation		Formed by <u>sliding</u> every point of a shape the same direction and distance

Polygons

Polygons are CLOSED PLANE figures that are made up of LINES that do NOT CROSS and are NOT CURVED

Triangle

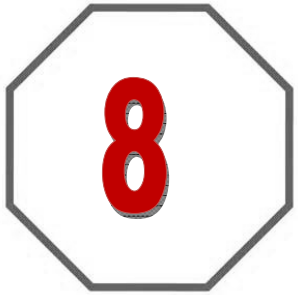


Quadrilateral

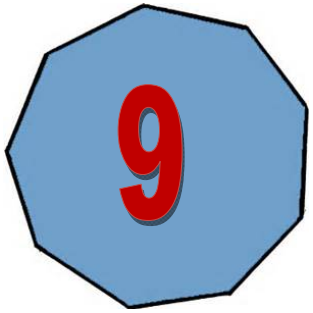
Pentagon

Hexagon

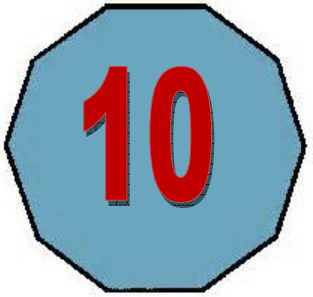
Heptagon



Octagon

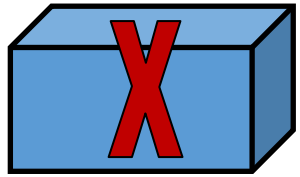


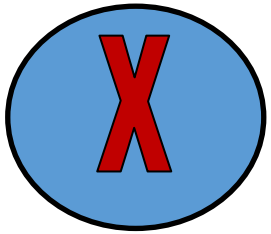
Nonagon

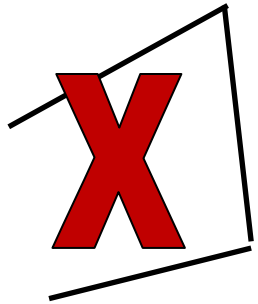


Decagon

NOT A POLYGON







Quadrilaterals

SQUARE

RHOMBUS

ALL SIDES SAME LENGTH

ALL 4 ANGLES 90°

RECTANGLE

2 PAIRS OF ANGLES SAME LENGTH

PARALLELOGRAM

2 PAIRS OF LINES SAME LENGTH

TWO SETS OF PARALLEL LINES

TRAPEZOID

ONE SET OF PARALLEL LINES