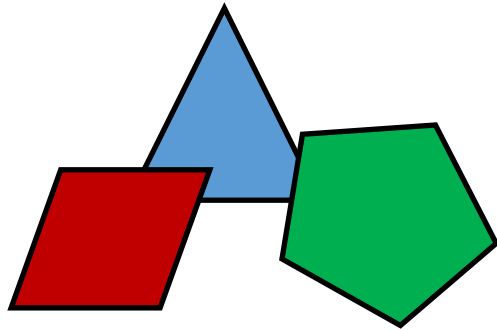
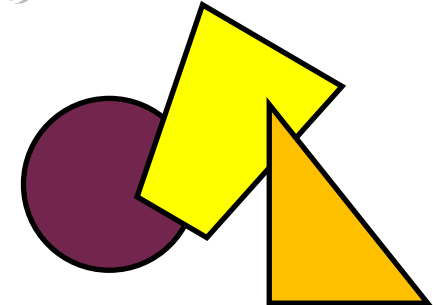




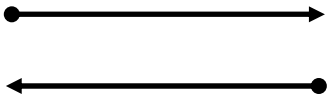


Geometry Study Guide



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

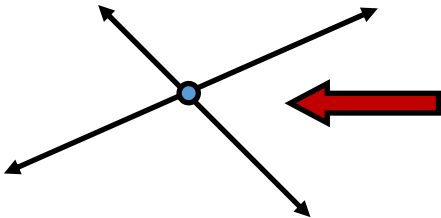

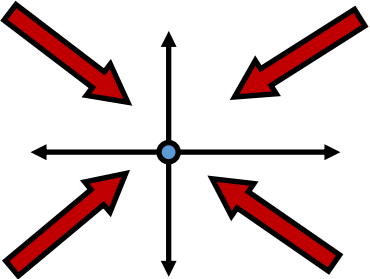


Lines and Angles

| | | |
|--------------|---|---|
| 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

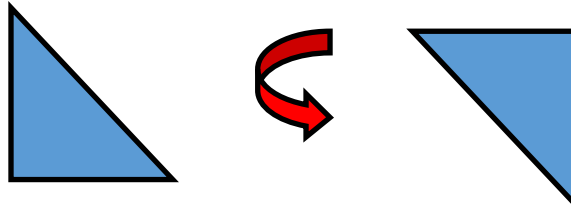
Line Representations

| | | |
|---------------|---|--|
| Intersecting |  A diagram showing two black lines intersecting at a central point marked with a blue dot. Four arrows extend from the intersection point, one along each line. A thick red arrow points from the right towards the intersection point. | Lines that have <u>one</u> point in common |
| Parallel |  A diagram showing two parallel black lines slanted upwards from left to right. Between the lines, the text "WILL NEVER CROSS" is written in a bold, red, italicized font, slanted to match the lines. Arrows extend from both ends of each line. | Lines that lay in the same place and <u>never</u> intersect. They stay the <u>same distance</u> apart. |
| Perpendicular |  A diagram showing two black lines intersecting at a central point marked with a blue dot. One line is horizontal and the other is vertical. Four thick red arrows point towards the intersection point from the four quadrants, indicating right angles. | Lines that are special intersecting lines that form <u>right angles</u> (90°). |

Transformation

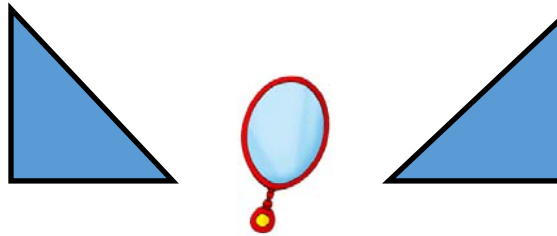
All second shapes that have completed the transformation are congruent (same size).

Rotation



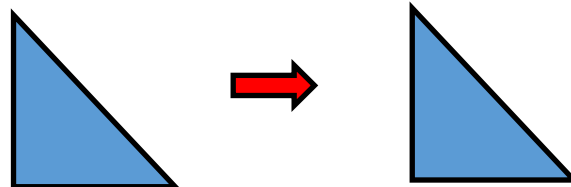
Formed by turning the shape on a point

Reflection



Formed by flipping a shape over a line (the line of reflection)

Translation



Formed by sliding 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



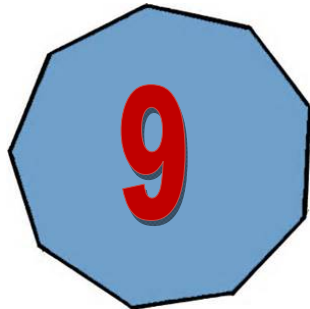
Hexagon



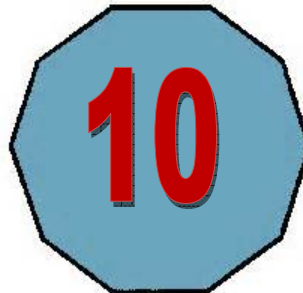
Heptagon



Octagon

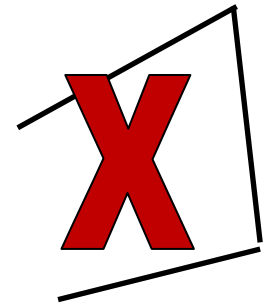
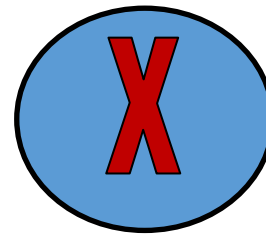
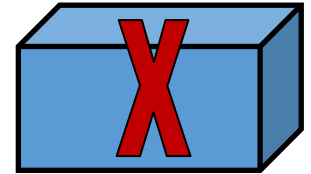
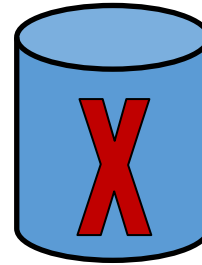


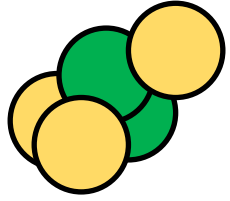
Nonagon



Decagon

NOT A POLYGON





Quadrilaterals

