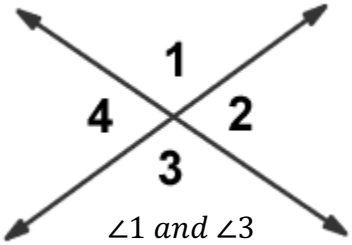
Vertical Angles

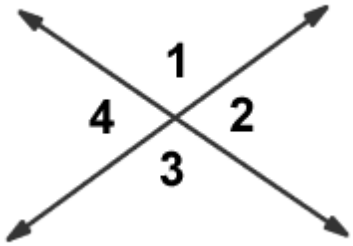


$\angle 1 \text{ and } \angle 3$

$\angle 2 \text{ and } \angle 4$

Vertical angles are congruent.

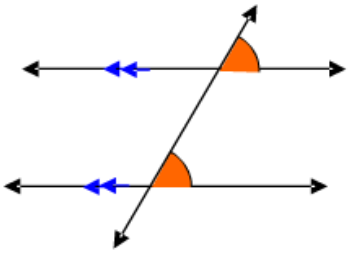
Straight Angles



$\angle 1 \text{ and } \angle 2, \angle 3 \text{ and } \angle 4, \angle 1 \text{ and } \angle 4, \angle 2 \text{ and } \angle 3$

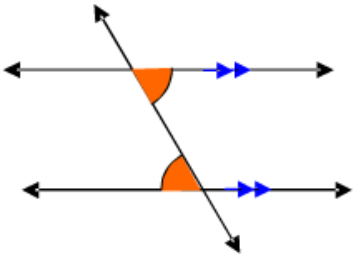
Straight angles are supplementary.

Corresponding Angles



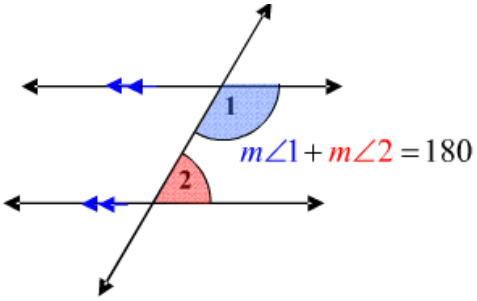
Corresponding Angles Are Congruent

Alternate Interior Angles



Alternate Interior Angles Are Congruent

Same-Side Interior Angles



Same-Side Interior Angles Are Supplementary

$\text{Area of a Rectangle} = b \cdot h$

$\text{Area of a Parallelogram} = b \cdot h$

$\text{Area of a Triangle} = \frac{b \cdot h}{2}$

$\text{Area of a Trapezoid} = \frac{(b_1 + b_2) \cdot h}{2}$

Pythagorean Theorem

$(leg)^2 + (leg)^2 = (hypotenuse)^2$

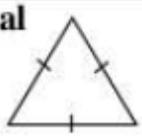
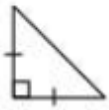
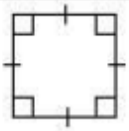
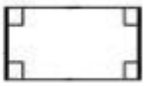
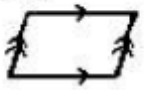
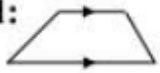
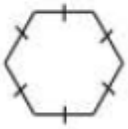
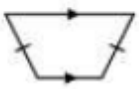
Tangent ratio

$$\tan\theta = \frac{opposite\ leg}{adjacent\ leg} = \frac{\Delta y}{\Delta x}$$

Similarity conditions

$SSS{\sim}, AA{\sim}, SAS{\sim}$

Shapes Toolkit Key

Equilateral Triangle:  A triangle with all sides of equal length.	**Isosceles Triangle:**  A triangle with two sides of equal length.	**Scalene Triangle:**  A triangle with no sides of equal length. That is, all sides have a different length.	**Scalene Right Triangle:**  A triangle with a 90° angle and all sides of different length.
Isosceles Right Triangle:  A triangle with a 90° angle and two sides of equal length.	**Square:**  A quadrilateral with four right angles and four sides of equal length.	**Rectangle:**  A quadrilateral with four right angles.	**Parallelogram:**  A quadrilateral with two pairs of parallel sides.
Trapezoid:  A quadrilateral with one pair of parallel sides.	**Rhombus:**  A quadrilateral with all sides of equal length.	**Quadrilateral:**  A polygon with four sides.	**Kite:**  A quadrilateral with two pairs of consecutive, equal sides.
Regular Pentagon:  A five-sided polygon with all sides of equal length and all angles of equal measure.	**Regular Hexagon:**  A six-sided polygon with all sides of equal length and all angles of equal measure.	**Isosceles Trapezoid:**  A quadrilateral that has two sides that are parallel, and the other two sides have equal length.	**Circle:**  The set of points equidistant from a central point.