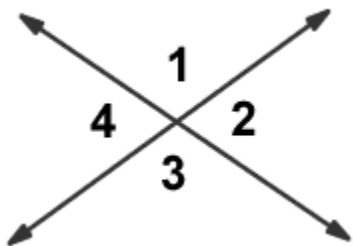
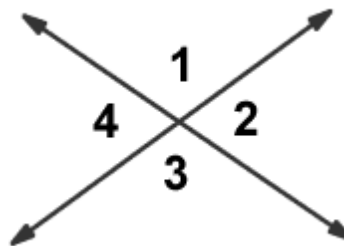


Vertical Angles



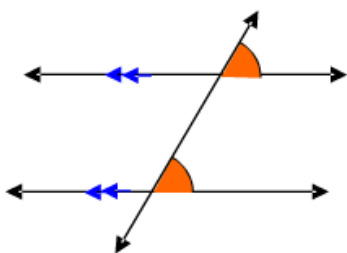
$\angle 1$ and $\angle 3$ are vertical angles
 $\angle 2$ and $\angle 4$ are vertical angles
Vertical angles are congruent.

Straight Angles



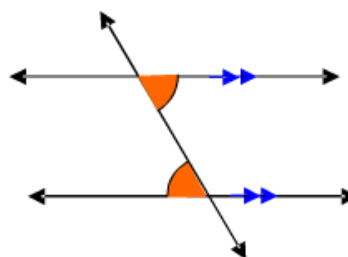
$\angle 1$ and $\angle 2$, $\angle 3$ and $\angle 4$, $\angle 1$ and $\angle 4$, $\angle 2$ and $\angle 3$
are straight angles
Straight angles are supplementary.

Corresponding Angles



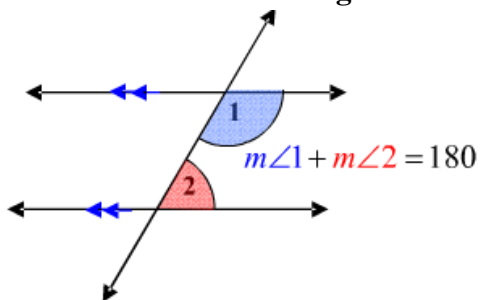
Corresponding Angles Are Congruent

Alternate Interior Angles



Alternate Interior Angles Are Congruent

Same-Side Interior Angles



Same-Side Interior Angles Are Supplementary

Area of a Rectangle = $b \cdot h$

Area of a Parallelogram = $b \cdot h$

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

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

Right Triangle Trigonometry:

$$\sin \theta = \frac{\text{Opposite leg}}{\text{Hypotenuse}}$$

$$\cos \theta = \frac{\text{Adjacent leg}}{\text{Hypotenuse}}$$

$$\tan \theta = \frac{\text{Opposite leg}}{\text{Adjacent leg}}$$

Law of Sines (works for AAS & ASA):

$$\frac{\sin A}{a} = \frac{\sin B}{b} = \frac{\sin C}{c}$$

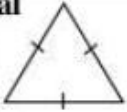




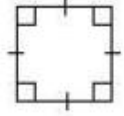
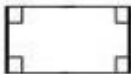
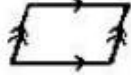
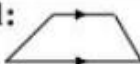

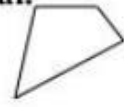

Law of Cosines (works for SAS & SSS):

$$a^2 = b^2 + c^2 - 2bc \cdot \cos A$$

$$b^2 = a^2 + c^2 - 2ac \cdot \cos B$$

$$c^2 = a^2 + b^2 - 2ab \cdot \cos C$$

$$\text{Midpoint Formula: } (X_m, Y_m) = \left(\frac{x_1 + x_2}{2}, \frac{y_1 + y_2}{2} \right)$$

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.

Congruence criteria: AAS ≅, ASA ≅, SAS ≅, SSS ≅, HL ≅
Similarity criteria: SSS ~, SAS ~, AA ~

Standard Deck of Cards

										Face Cards				
Red	{	2	3	4	5	6	7	8	9	10	J	Q	K	A
		♥	♥	♥	♥	♥	♥	♥	♥	♥	♥	♥	♥	♥
Black	{	2	3	4	5	6	7	8	9	10	J	Q	K	A
		♣	♣	♣	♣	♣	♣	♣	♣	♣	♣	♣	♣	♣
		2	3	4	5	6	7	8	9	10	J	Q	K	A
		♠	♠	♠	♠	♠	♠	♠	♠	♠	♠	♠	♠	♠