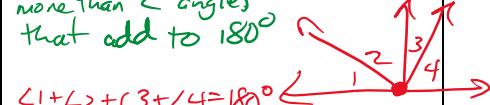
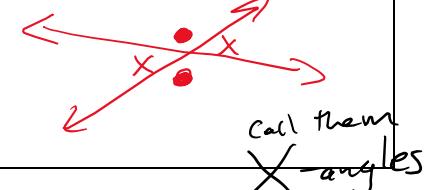
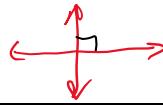
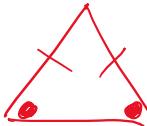
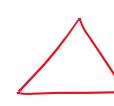
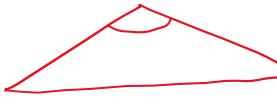
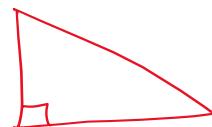


# Geometric Properties

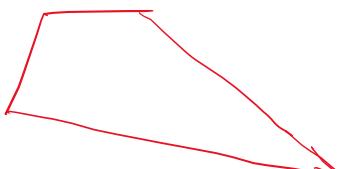
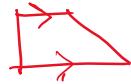
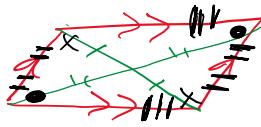
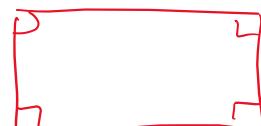
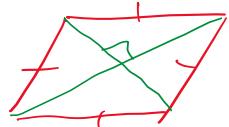
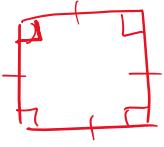
## Angle Properties

Acute an angle $< 90^\circ$ 	Straight = $180^\circ$ 	Angles at a point angles add to $360^\circ$ $\angle 1 + \angle 2 + \angle 3 = 360^\circ$ 
Obtuse angle $> 90^\circ$ but $< 180^\circ$ 	Complimentary 2 angles that add to $90^\circ$  $\angle 1 + \angle 2 = 90^\circ$	Angles on a line more than 2 angles that add to $180^\circ$ $\angle 1 + \angle 2 + \angle 3 + \angle 4 = 180^\circ$ 
Right = $90^\circ$ 	Supplementary 2 angles that add to $180^\circ$  $\angle 1 + \angle 2 = 180^\circ$	Vertically opposite angles angles that are across from each other when two lines cross. Are equal to each other 
Perpendicular two lines that cross at $90^\circ$ 		

## Triangle Properties

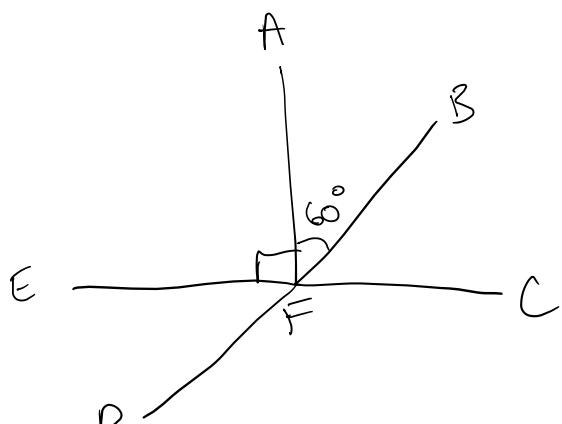
Scalene - all side lengths are different - all angles are different 	Isosceles - two sides are <sup>equal</sup> - two angles are equal 	Equilateral - all sides are equal - all angles are equal ( $60^\circ$ ) 
Acute Triangle - all angles are less than $90^\circ$ 	Obtuse Triangle - one angle is more than $90^\circ$ less than $180^\circ$ 	Right Triangle - has one angle that is $90^\circ$ 
Angle Sum - all angles in a $\triangle$ add to $180^\circ$		

## Quadrilateral Properties

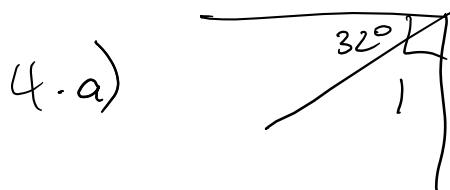
<p><b>Quadrilateral</b> - shape with 4 sides          - all angles add to <math>360^\circ</math></p> 	<p><b>Trapezoid</b> - one set of parallel lines</p>   <p>"isosceles trapezoid"</p>	<p><b>Parallelogram</b></p> <ul style="list-style-type: none"> <li>- two sets of parallel lines</li> <li>- diagonals bisect each other</li> <li>- two sets of equal lengths</li> <li>- opposite vertices are equal</li> </ul> 
<p><b>Rectangle</b></p> <ul style="list-style-type: none"> <li>- same as parallelogram</li> <li>- all angles are <math>90^\circ</math></li> </ul> 	<p><b>Rhombus</b></p> <ul style="list-style-type: none"> <li>- same as parallelogram</li> <li>- all sides are equal</li> <li>- diagonals bisect at <math>90^\circ</math></li> </ul> 	<p><b>Square</b></p> <ul style="list-style-type: none"> <li>- same as rhombus</li> <li>- all angles are <math>90^\circ</math></li> </ul> 

**Congruent** - same shape and size

**Similar** - same shape but different size



3 acute  $\angle$ s  $\angle AFB, \angle BFC, \angle EFD$



$$\angle 1 = 90 - 32$$

$58^\circ$