



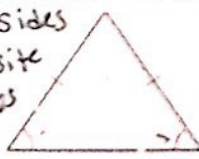

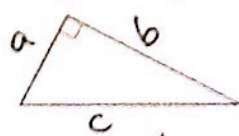
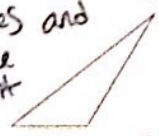
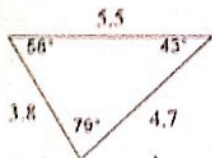


# ANGLES, TRIANGLES AND QUADRILATERALS TOOLKIT

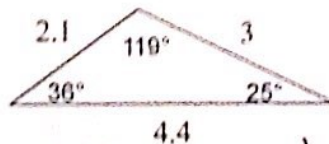
For each shape or angle below, draw a diagram and state all you know about the angles, sides and/or diagonals of the shape.

<p style="text-align: center;">Acute Angle</p> <p>(smaller than right angle)</p>  <p>An angle <u>less</u> than <math>90^\circ</math></p>	<p style="text-align: center;">Obtuse Angle</p>  <p>An angle <u>more</u> than <math>90^\circ</math> (bigger than right angle)</p>	<p style="text-align: center;">Straight Angle</p>  <p>An angle of <u>exactly</u> <math>180^\circ</math> (a straight line)</p>
<p style="text-align: center;">Right Angle</p>  <p>An angle of <u>exactly</u> <math>90^\circ</math> (a corner, perpendicular)</p>	<p style="text-align: center;">Isosceles Triangle</p> <p>* the <math>\cong</math> sides are opposite the <math>\cong</math> angles</p>  <p>A triangle with - 2 congruent sides AND - 2 congruent angles</p>	<p style="text-align: center;">Equilateral Triangle</p> <p>* All <math>\angle</math>s will always be <math>60^\circ</math></p>  <p>A triangle with - 3 <math>\cong</math> sides AND - 3 <math>\cong</math> Angles</p>
<p style="text-align: center;">Right Triangle</p>  <p>A triangle with one <math>90^\circ</math> angle. (<math>a^2 + b^2 = c^2</math>, other angles always acute)</p>	<p style="text-align: center;">Scalene Triangle</p> <p>* all sides and angles are different</p>  <p>A triangle with - <u>No</u> congruent sides AND - <u>No</u> congruent angles</p>	

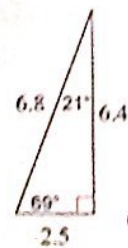
Examples of labeling triangles using sides and angles



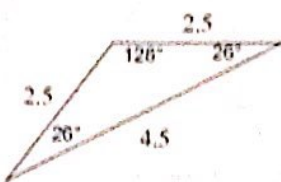
acute scalene



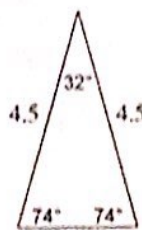
obtuse scalene



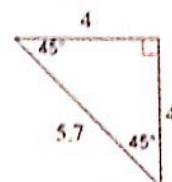
right scalene



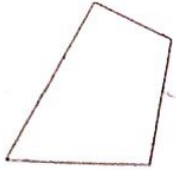


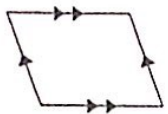


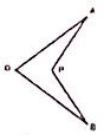
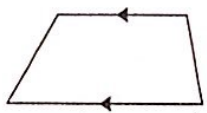
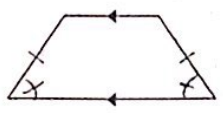
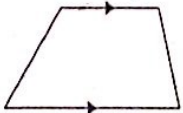
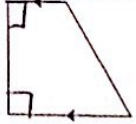
obtuse isosceles



acute isosceles



right isosceles

<p>Quadrilateral</p>  <p>General Term for a 4-sided figure</p>	<p>Rectangle</p>  <ul style="list-style-type: none"> <li>• a quad. with 4 right angles</li> <li>• a parallelogram with 4 right angles</li> <li>• opposite sides <math>\cong</math></li> </ul>	<p>Square</p>  <ul style="list-style-type: none"> <li>- quad with 4 right angles</li> <li>- rhombus w/ 4 right angles</li> <li>- rectangle with <math>\cong</math> sides</li> </ul>
<p>Parallelogram</p>  <ul style="list-style-type: none"> <li>- quad with 2 pairs of parallel sides</li> <li>- opposite sides <math>\cong</math></li> <li>- opposite angles <math>\cong</math></li> <li>- consecutive angles supplementary</li> </ul>	<p>Rhombus</p>  <ul style="list-style-type: none"> <li>• Parallelogram with <math>\cong</math> sides</li> </ul>	
<p>Kite</p>  <p>2 pairs of adjacent <math>\cong</math> sides</p>	<p>Inverted Kite</p>  <p>2 pairs of adjacent <math>\cong</math> sides</p>	<p>Trapezoid</p>  <ul style="list-style-type: none"> <li>- 1 pair of parallel sides</li> <li>- parallel sides - bases</li> <li>- non-parallel sides - leg</li> </ul>
<p>Isosceles Trapezoid</p>  <p>trapezoid with <math>\cong</math> legs base angles are <math>\cong</math></p>	<p>Scalene Trapezoid</p>  <p>trapezoid with all sides different lengths</p>	<p>Right Trapezoid</p>  <p>trapezoid with <math>90^\circ</math> angle.</p>