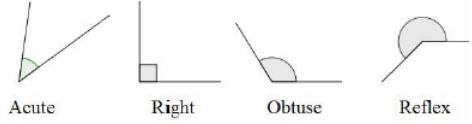
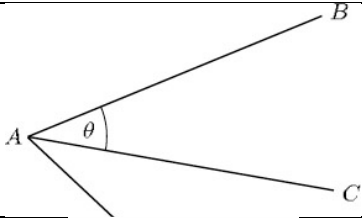
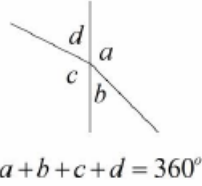
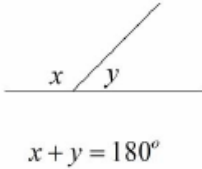
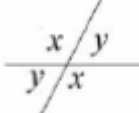
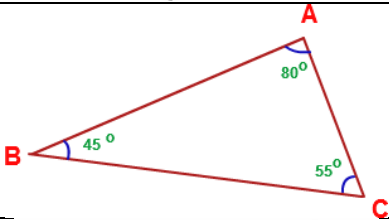
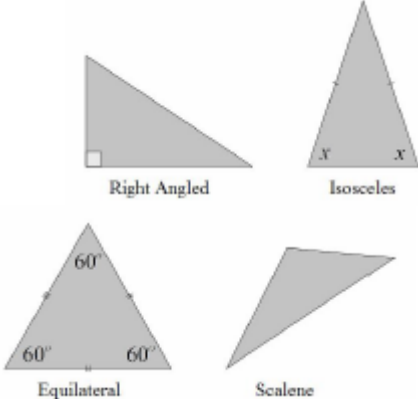
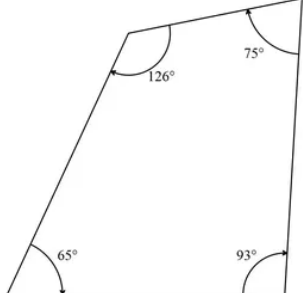
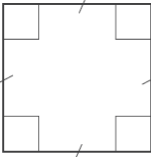
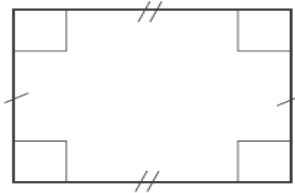
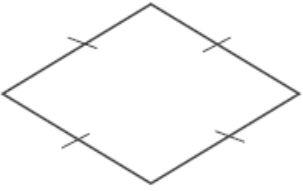
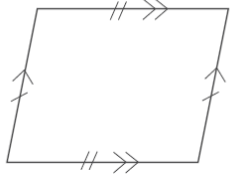
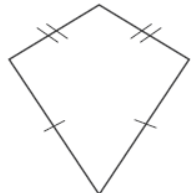


## KS3 Unit 11 Angle Facts Triangles and Quadrilaterals

Topic/Skill	Definition/Tips	Example
1. Types of Angles	<p><b>Acute angles</b> are less than <math>90^\circ</math>.</p> <p><b>Right angles</b> are exactly <math>90^\circ</math>.</p> <p><b>Obtuse angles</b> are greater than <math>90^\circ</math> but less than <math>180^\circ</math>.</p> <p><b>Reflex angles</b> are greater than <math>180^\circ</math> but less than <math>360^\circ</math>.</p>	 <p>Acute      Right      Obtuse      Reflex</p>
2. Angle Notation	<p>Can use <b>one lower-case</b> letters, eg. <math>\theta</math> or <math>x</math></p> <p>Can use <b>three upper-case</b> letters, eg. <math>BAC</math></p>	
3. Angles at a Point	<p><b>Angles around a point add up to <math>360^\circ</math>.</b></p>	 <p><math>a + b + c + d = 360^\circ</math></p>
4. Angles on a Straight Line	<p><b>Angles around a point on a straight line add up to <math>180^\circ</math>.</b></p>	 <p><math>x + y = 180^\circ</math></p>
5. Opposite Angles	<p><b>Vertically opposite angles are equal.</b></p>	
9. Angles in a Triangle	<p><b>Angles in a triangle add up to <math>180^\circ</math>.</b></p>	
10. Types of Triangles	<p><b>Right Angle</b> Triangles have a <math>90^\circ</math> angle in.</p> <p><b>Isosceles</b> Triangles have <b>2 equal sides</b> and <b>2 equal base angles</b>.</p> <p><b>Equilateral</b> Triangles have <b>3 equal sides</b> and <b>3 equal angles (<math>60^\circ</math>)</b>.</p> <p><b>Scalene</b> Triangles have <b>different sides</b> and <b>different angles</b>.</p> <p><b>Base angles in an isosceles triangle are equal.</b></p>	 <p>Right Angled      Isosceles</p> <p>Equilateral      Scalene</p>

11. Angles in a Quadrilateral	<b>Angles in a quadrilateral add up to <math>360^\circ</math>.</b>	
12. Square	<ul style="list-style-type: none"> <li>• <b>Four equal sides</b></li> <li>• <b>Four right angles</b></li> <li>• <b>Opposite sides parallel</b></li> <li>• <b>Diagonals bisect each other at right angles</b></li> <li>• <b>Four lines of symmetry</b></li> </ul> <b>Rotational symmetry of order four</b>	
13. Rectangle	<ul style="list-style-type: none"> <li>• <b>Two pairs of equal sides</b></li> <li>• <b>Four right angles</b></li> <li>• <b>Opposite sides parallel</b></li> <li>• <b>Diagonals bisect each other, not at right angles</b></li> <li>• <b>Two lines of symmetry</b></li> </ul> <b>Rotational symmetry of order two</b>	
14. Rhombus	<ul style="list-style-type: none"> <li>• <b>Four equal sides</b></li> <li>• <b>Diagonally opposite angles are equal</b></li> <li>• <b>Opposite sides parallel</b></li> <li>• <b>Diagonals bisect each other at right angles</b></li> <li>• <b>Two lines of symmetry</b></li> </ul> <b>Rotational symmetry of order two</b>	
15. Parallelogram	<ul style="list-style-type: none"> <li>• <b>Two pairs of equal sides</b></li> <li>• <b>Diagonally opposite angles are equal</b></li> <li>• <b>Opposite sides parallel</b></li> <li>• <b>Diagonals bisect each other, not at right angles</b></li> <li>• <b>No lines of symmetry</b></li> </ul> <b>Rotational symmetry of order two</b>	
16. Kite	<ul style="list-style-type: none"> <li>• <b>Two pairs of adjacent sides of equal length</b></li> <li>• <b>One pair of diagonally opposite angles are equal</b> (where different length sides meet)</li> <li>• <b>Diagonals intersect at right angles, but do not bisect</b></li> <li>• <b>One line of symmetry</b></li> </ul> <b>No rotational symmetry</b>	

17. Trapezium

- **One pair of parallel sides**
- **No lines of symmetry**
- **No rotational symmetry**

Special Case: Isosceles Trapeziums have one line of symmetry.

