MATHEMATICS Unit 11: Investigating Angles	Year Group: 8 set 4-5

Key Vocabulary

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Angle	A measure of turn, usually given in degrees. Measured with a protractor
Acute angle	An angle less than 90º
Right angle	An angle of 90º, marked with a little square in the corner of the angle
Obtuse angle	An angle greater than 90º but less than 180º
Straight line	180º
Reflex angle	An angle greater than 180º
Full turn	360º
Vertically opposite angles	When two straight lines cross over, there will be two pairs of angles that are exactly the same size. These are referred to as vertically opposite angles
Degree	The standard measure of the size of a turn. A full turn is 360º
Protractor	Mathematical instrument for measuring an angle
Equilateral triangle	A triangle with all three sides the same length and all three angles the same (60º)
Isosceles triangle	A triangle with two sides the same length and two angles the same size

Key facts / Diagrams

The angles in a triangle add up to 180º

a + b + c = 180º

Angles that make a straight line add up to 180º

a + b = 180º

Angles that make a complete turn add up to 360º

a + b + c = 360º

Angles that are vertically opposite are equal

Common misconceptions

- Students should think about the "reasonableness" of answers. They should estimate the size of angles before they measure or calculate so they know the answer is sensible.
- Students need to know the "dashes" on lines in a triangle indicate sides that are the same length and which angles are therefore the same size

Worked examples

75º

x
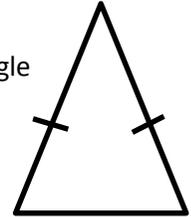
The square indicates a right angle, 90º

90 +75 = 165

180 – 165 = 15

X = 15º