


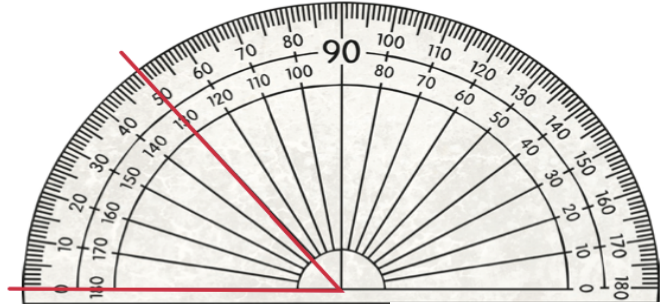
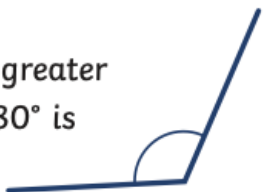
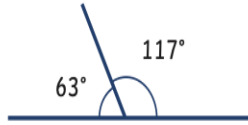

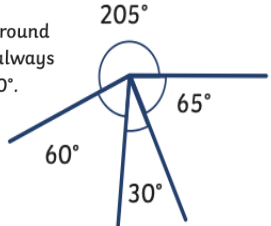


St John Fisher RC Primary School

Year 6 Maths Knowledge Organiser

Summer – Properties of Shape (1)

Objectives	Teacher
<ul style="list-style-type: none"> I can measure & draw angles using a protractor. 	
<ul style="list-style-type: none"> I can calculate angles around on a straight line and around a point. 	

Types of angle	Measuring Angles
<p>Acute Angles Any angle that measures less than 90° is called an acute angle.</p> 	<p>To measure angles, we use a protractor. Look carefully at how the numbers on the scale count from 0° to 180° in both directions.</p> 
<p>Obtuse Angles Any angle that measures greater than 90° and less than 180° is called an obtuse angle.</p> 	<p>Angles on a straight line always total 180°.</p> 
<p>Reflex Angles Any angle that measures greater than 180° is called a reflex angle.</p> 	<p>Angles around a point always total 360°.</p> 

Key Vocabulary	
angle	An angle is a measure of a turn.
degree	Angles are measured in degrees of a turn. There are 360 degrees in a full turn.
right angle	A right angle has 90 degrees.
protractor	A device for measuring angles in degrees.
horizontal	A line that goes from left to right.
vertical	A line that goes up and down (top to bottom).

Sentence Stems	
Angles in a right angle add up to ___ degrees.	Angles on a straight line add up to ___ degrees.
Angles around a point add up to ___ degrees.	If an angle ___ than 90 degrees, I need to use the ___ scale on the protractor.

Assessment



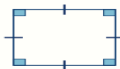

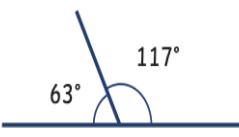
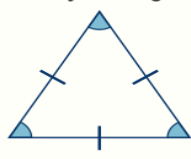

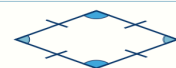
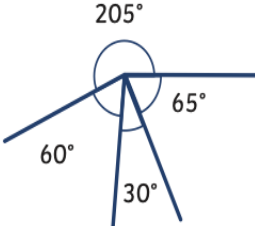
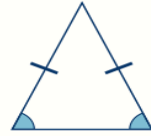
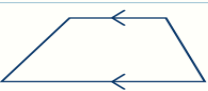

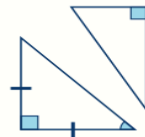
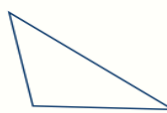
St John Fisher RC Primary School

Year 6 Maths Knowledge Organiser

Summer – Properties of Shape (2)



Objectives	Teacher
<ul style="list-style-type: none"> I can compare and classify geometric shapes based on their properties and sizes. I can also find unknown angles in any triangles, quadrilaterals or regular polygons. 	
<ul style="list-style-type: none"> I can recognise angles where they meet at a point, are on a straight line or are vertically opposite. I can then find any missing angles. 	

Angles in Shapes

<p>A quadrilateral is a polygon with four sides.</p>  <p>A square has four sides of equal length and four right angles (90°). A square is also a rectangle, a rhombus and a parallelogram.</p>	<p>A rectangle has two pairs of parallel, equal sides and four right angles. A rectangle is also a parallelogram.</p> 	 <p>Angles on a straight line always total 180°.</p>	<p>Triangles have 3 sides and 3 vertices. The total of the angles in a triangle is 180°.</p>  <p>An equilateral triangle is a regular polygon. It has sides of equal length and each angle is 60°.</p>
<p>A parallelogram has two pairs of parallel, equal sides and opposite equal angles.</p> 	<p>A rhombus has four sides of equal length and opposite equal angles. A rhombus is also a parallelogram.</p> 	 <p>Angles around a point always total 360°.</p>	<p>An isosceles triangle has two sides of equal length and two angles of equal size.</p> 
<p>A trapezium only has one pair of opposite parallel sides.</p> 	<p>A kite has two pairs of adjacent equal sides and one pair of opposite equal angles.</p> 	<p>A right-angled triangle always has one 90° angle. It can be isosceles or scalene.</p> 	<p>A scalene triangle has no equal sides or angles.</p> 

As the number of sides of a polygon increases by one, the total of the interior angles increases by 180°. When n = number of sides, this formula can be used to find the size of each angle in a **regular polygon**:

Sum of Interior Angles = (n - 2) × 180°	Each Angle = $\frac{(n - 2) \times 180^\circ}{n}$
--	---

 <p>Pentagon n = 5 (5 - 2) × 180° = 540° 540° ÷ 5 = 108°</p>	 <p>Hexagon n = 6 (6 - 2) × 180° = 720° 720° ÷ 6 = 120°</p>
--	---

Key Vocabulary

angle	An angle is a measure of a turn.
degree	Angles are measured in degrees of a turn. There are 360 degrees in a full turn.
protractor	A device for measuring angles in degrees.
polygon	A 2D shape with 3 or more straight sides and angles.
triangle	A 2D shape that has 3 sides and 3 angles.
2-dimensional	A polygon with two dimensions, width and length.

Sentence Stems

Vertically opposite angles are ____ .	The angles in a ____ add up to ____ degrees.
If angle ____ is ____ degrees, then angle ____ is also ____ degrees.	The total of angle ____ and angle ____ is ____ degrees. To find angle ____, subtract ____ from ____ .

Assessment