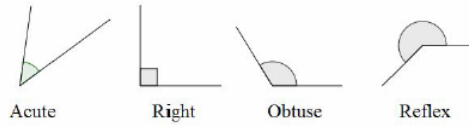
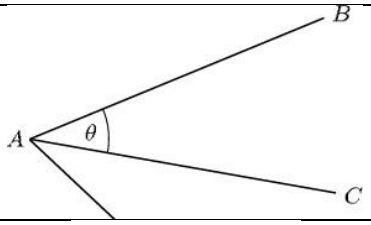
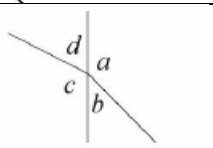
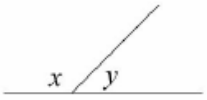
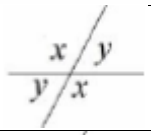
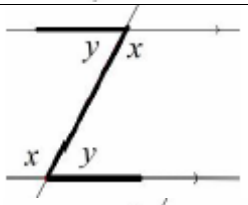
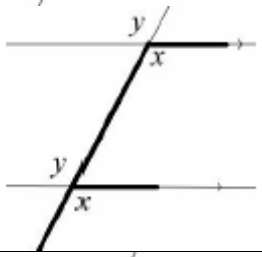
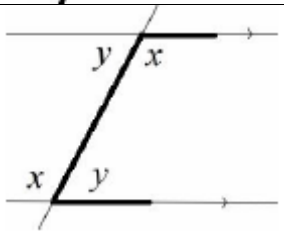
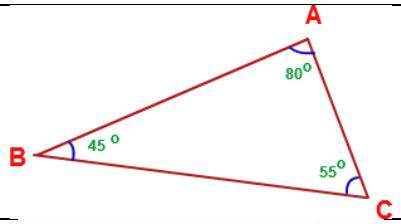
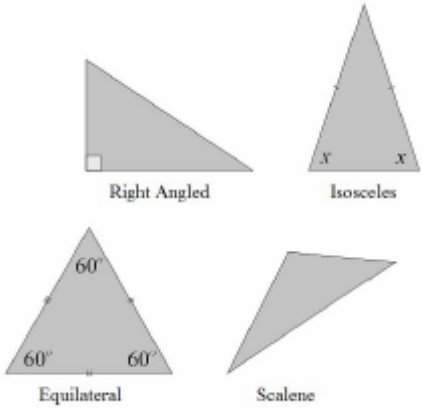
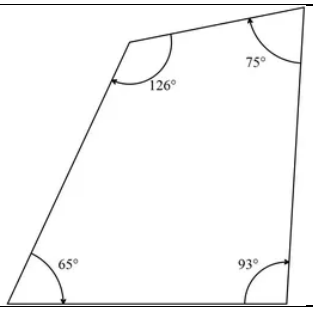
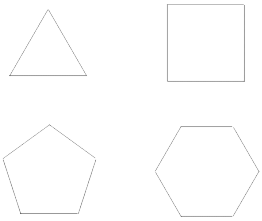
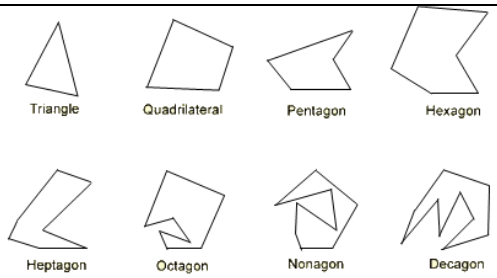
Year 8 Sets 3 and 4 Spring Half Term 1

Topic/Skill	Definition/Tips	Example
1. Types of Angles	**Acute angles** are less than 90°. **Right angles** are exactly 90°. **Obtuse angles** are greater than 90° but less than 180°. **Reflex angles** are greater than 180° but less than 360°.	
2. Angle Notation	Can use **one lower-case** letters, eg. θ or x Can use **three upper-case** letters, eg. BAC	
3. Angles at a Point	**Angles around a point add up to 360°**.	 $a+b+c+d=360^o$
4. Angles on a Straight Line	**Angles around a point on a straight line add up to 180°**.	 $x+y=180^o$
5. Opposite Angles	**Vertically opposite angles are equal**.	
6. Alternate Angles	**Alternate angles are equal**. They look like Z angles, but never say this in the exam.	
7. Corresponding Angles	**Corresponding angles are equal**. They look like F angles, but never say this in the exam.	
8. Co-Interior Angles	**Co-Interior angles add up to 180°**. They look like C angles, but never say this in the exam.	

9. Angles in a Triangle	**Angles in a triangle add up to 180°.**	
10. Types of Triangles	**Right Angle** Triangles have a **90°** angle in. **Isosceles** Triangles have **2 equal sides** and **2 equal base angles**. **Equilateral** Triangles have **3 equal sides** and **3 equal angles (60°)**. **Scalene** Triangles have **different sides** and **different angles**. **Base angles in an isosceles triangle are equal.**	
11. Angles in a Quadrilateral	**Angles in a quadrilateral add up to 360°.**	
12. Polygon	A **2D** shape with **only straight edges**.	Rectangle, Hexagon, Decagon, Kite etc.
13. Regular	A shape is regular if all the **sides** and all the **angles** are **equal**.	
14. Names of Polygons	**3**-sided = **Triangle** **4**-sided = **Quadrilateral** **5**-sided = **Pentagon** **6**-sided = **Hexagon** **7**-sided = **Heptagon**/Septagon **8**-sided = **Octagon** **9**-sided = **Nonagon** **10**-sided = **Decagon**	
15. Sum of Interior Angles	$(\boldsymbol{n-2})\times\boldsymbol{180}$ where n is the number of sides.	Sum of Interior Angles in a Decagon = $(10-2)\times 180 = 1440°$
16. Size of Interior Angle in a Regular Polygon	$\dfrac{(\boldsymbol{n-2})\times\boldsymbol{180}}{\boldsymbol{n}}$ You can also use the formula:	Size of Interior Angle in a Regular Pentagon = $\dfrac{(5-2)\times 180}{5} = 108°$

	$\mathbf{180 - \textit{Size of Exterior Angle}}$	
17. Multiplying with decimals	Multiply each number by a power of ten until it is an integer. Multiply the numbers together. Then divide by answer by the total power of ten.	
18. Dividing with decimals	Write the question as a fraction, multiply numerator and denominator by the same power or 10 until they are integers. Then divide the two numbers.	
19. Rounding	Find the place value you need to round to, look one place to the right. 5 or more- round up 4 or less- keep the same	
20. Rounding to significant figures	Significant means important. Find the number of places that are significant, look one place to the right. 5 or more- round up 4 or less- keep the same Remember- keep the place value of the original number.	
21. Estimating	When you are asked to estimate, round <u>each</u> number to <u>1 significant figure</u>, then calculate.	