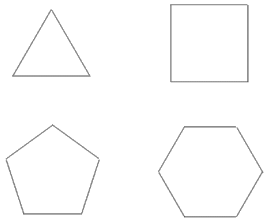
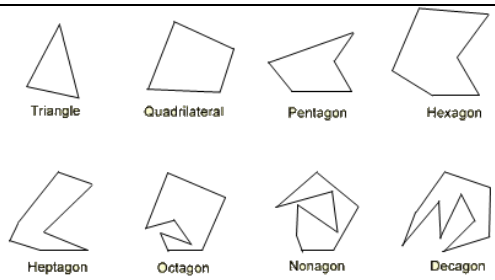
KS3 Unit 35 Angles in Polygons

Topic/Skill	Definition/Tips	Example
1. Polygon	A **2D** shape with **only straight edges**.	Rectangle, Hexagon, Decagon, Kite etc.
2. Regular	A shape is regular if all the **sides** and all the **angles** are **equal**.	
3. Names of Polygons	**3**-sided = **Triangle** **4**-sided = **Quadrilateral** **5**-sided = **Pentagon** **6**-sided = **Hexagon** **7**-sided = **Heptagon** **8**-sided = **Octagon** **9**-sided = **Nonagon** **10**-sided = **Decagon**	
4. Sum of Interior Angles	$(\boldsymbol{n-2})\times\boldsymbol{180}$ where n is the number of sides.	Sum of Interior Angles in a Decagon = $(10-2)\times 180 = 1440°$
5. Size of Interior Angle in a Regular Polygon	$\dfrac{(\boldsymbol{n-2})\times\boldsymbol{180}}{\boldsymbol{n}}$ You can also use the formula: $\boldsymbol{180 - Size\ of\ Exterior\ Angle}$	Size of Interior Angle in a Regular Pentagon = $\dfrac{(5-2)\times 180}{5} = 108°$
6. Size of Exterior Angle in a Regular Polygon	$\dfrac{\boldsymbol{360}}{\boldsymbol{n}}$ You can also use the formula: $\boldsymbol{180 - Size\ of\ Interior\ Angle}$	Size of Exterior Angle in a Regular Octagon = $\dfrac{360}{8} = 45°$