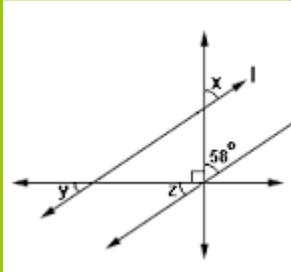# Year 8 Maths Homework Menu: HT5

For each unit you must choose one take away item for homework. The chilli rating suggests the difficulty of the task, or the challenge it might offer.
Choose your homework from the menu below. The extra hot tasks will gain the most bonus points. You can earn an extra bonus point for putting in maximum effort.
Your teacher will set your deadline and how you should submit your work.

More advanced thinking skills				Angles in parallel lines.	Angles in Polygons .	3D shape.
	REASONING	Creating	6	Make a poster showing all rules of angles in parallel lines giving an example question for each.	Show how the formula for finding an interior angle is found.	Research and find out the connection between the number of faces, vertices and edges for shapes with straight sides.
	REASONING	Evaluating	5	If an angle within parallel lines is $27°$ show with the aid of diagrams what the opposite angle, corresponding angle and alternate angle would be.	James says that the interior angle of an octagon is 125°. Is she correct? Explain your answer.	Is it possible for a shape to have 6 faces, 12 edges and 8 vertices? Give reasons.
	PROBLEM SOLVING	Analysing	4	Find X	How many sides does a regular polygon have if a) It has an interior angle of 45°? b) Has an interior angle of 150°?	Work through the task on this website. Write down the names of the shapes they make. https://nrich.maths.org/6307
	PROBLEM SOLVING	Applying	3	An angle in parallel lines is 48°, what would the co-interior, alternate and opposite angles be?	A tessellation is a tiling pattern with no gaps or overlaps. Explain why a regular hexagon tessellates.	Find the volume of cubes with these surface areas. a) 54cm^2 b) 294cm^2 c) 96cm^2

	Thinking skills						
		FLUENCY	Understanding	2	Find the missing angles.	Work out the size of one interior angle for each of an octagon, decagon and dodecagon.	Draw the net of a shape with volume 8 cm^2
		FLUENCY	Remembering	1	My Maths tasks 1082 1086 1109	My Maths tasks 1100 1320	My Maths tasks 1078 1098 1106