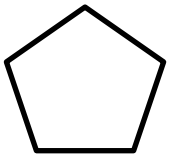
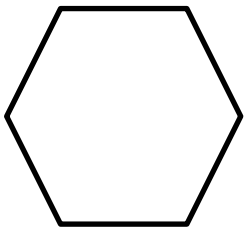
Exterior angles and regular polygons

Sketch the following two regular polygons and show formally how to find the size of the exterior angles. Use this to write down the size of the interior angles.





Find the size of the exterior angles of the following sized regular polygons and hence write down the size of the interior angle

7 sides	8 sides	9 sides	12 sides	20 sides
30 sides	60 sides	180 sides	360 sides	n sides

Find how many sides the regular polygons with the following properties have

Exterior angle $= 9°$	Exterior angle $= 8°$	Exterior angle $= 7.2°$
Interior angle $= 175.5°$	Interior angle $= 176°$	Interior angle $= 178°$

Could a regular polygon have the following properties. Explain your reasoning extremely carefully

Exterior angle $= 22.5°$	Exterior angle $= 34°$
Exterior angle $= 2.4°$	Interior angle $= 172°$

Regular Polygons and INTERIOR ANGLES

Understanding what the interior angles of an n-sided polygon add up to

Sketch an example of the following polygons and find what the interior angles sum to

8 sides	6 sides	12 sides	9 sides

Without sketching the following polygons, find what the interior angles sum to.

10 sides	5 sides	15 sides	22 sides
50 sides	102 sides	1002 sides	n sides

What would one of the interior angles of the following regular polygons be?

9 sides	14 sides	17 sides

Find the size of each of the angles in the following non-regular polygons (not drawn to scale)