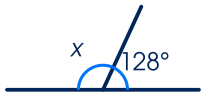
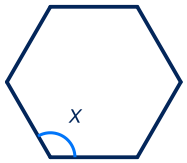
GCSE HIGHER · REVISION MAT 1

Angles and polygons

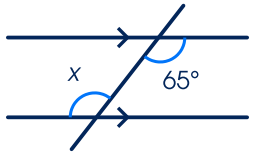
1 Find the angle x.



2 Find the interior angle of a regular hexagon.

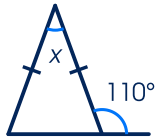


3 Find x. Give a reason.

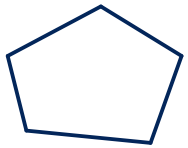


4 The triangle is isosceles.

Find x.



5 Show that the interior angles of a pentagon add up to 540°.

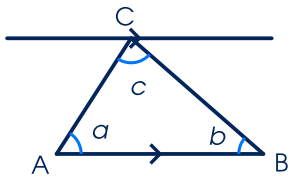


6 A regular polygon has exterior angles of 24°.

How many sides does it have?

Find the sum of its interior angles.

7 Use a line parallel to one side to prove that the angles in a triangle add up to 180°.



8 Each interior angle of a regular polygon is 4 times each exterior angle.

How many sides does it have?

Mr&Mrs MATHS

ANSWERS · REVISION MAT 1

Angles and polygons

1 180 – 128

x = 52°

2 Exterior 360 ÷ 6 = 60°

120°

3 **x = 65°**
(alternate angles are equal)

4 Base angles 180 – 110 = 70°

x = 180 – 140 = 40°

5 A pentagon splits into 3 triangles.

3 × 180 = 540°

6 360 ÷ 24 = 15 sides

13 × 180 = 2340°

7 Draw a line through the top vertex parallel to the base.

Two alternate angle pairs are equal.

The three angles fit on a straight line: 180°.

8 $e + 4e = 180 \Rightarrow e = 36°$

360 ÷ 36 = 10 sides

Mr&Mrs MATHS