



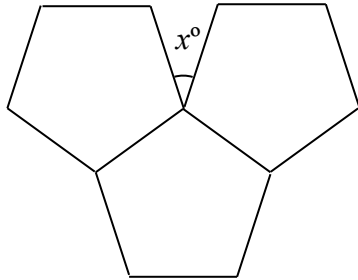
CHALLENGES

POLYGONS

MULTI-STEP PROBLEMS

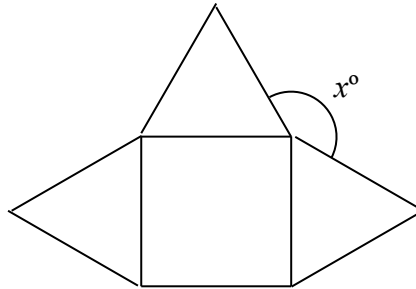
Ref: G424. **4C4**

A1 The diagram shows three regular pentagons.



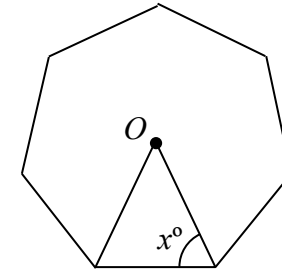
Work out the value of x .

A2 The diagram shows three equilateral triangles and a square.



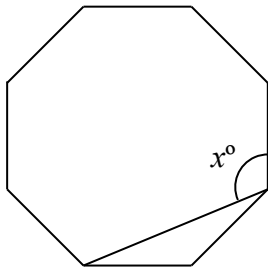
Work out the value of x .

A3 The diagram shows a regular heptagon with centre O .



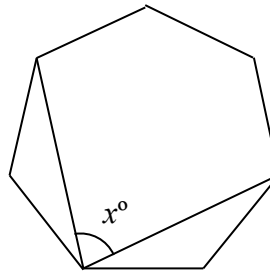
Work out the value of x .

B1 The diagram shows a regular octagon.



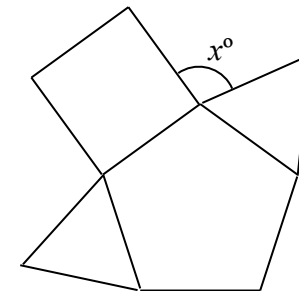
Find the value of x .
Show clear working out.

B2 The diagram shows a regular heptagon.



Find the value of x .
Show clear working out.

B3 The diagram shows a regular pentagon, a square and two equilateral triangles.



Work out the value of x .

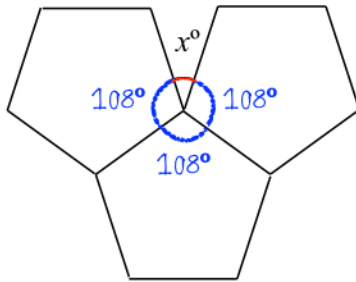


POLYGONS

MULTI-STEP PROBLEMS

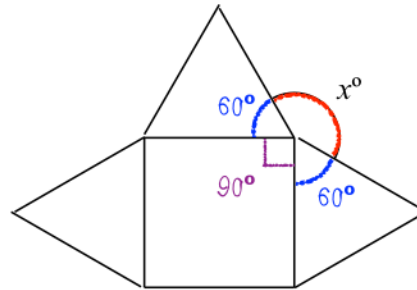
Ref: G424. **4C4**

A1 The diagram shows three regular pentagons.



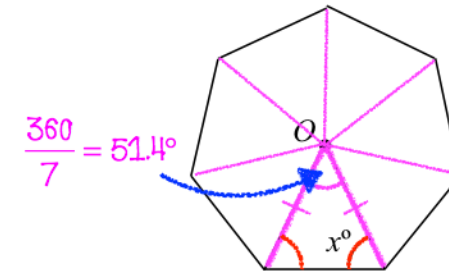
$$x = 360 - 3 \times 108$$
$$= 36^\circ$$

A2 The diagram shows three equilateral triangles and a square.



$$x = 360 - (60 + 90 + 60)$$
$$= 150^\circ$$

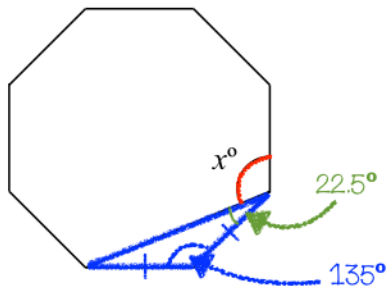
A3 The diagram shows a regular heptagon with centre O .



$$\frac{360}{7} = 51.4^\circ$$

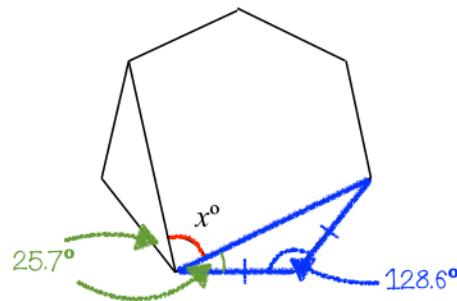
$$x = \frac{180 - 51.4}{2} = 64.3^\circ$$

B1 The diagram shows a regular octagon.



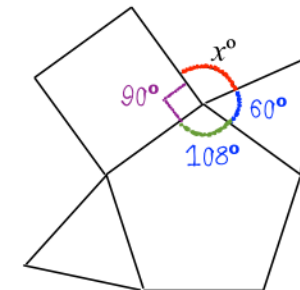
$$x = 135 - 22.5$$
$$= 112.5^\circ$$

B2 The diagram shows a regular heptagon.



$$x = 128.5 - 2 \times 25.7$$
$$= 77.1^\circ$$

B3 The diagram shows a regular pentagon, a square and two equilateral triangles.



$$x = 360 - (90 + 108 + 60)$$
$$= 102^\circ$$