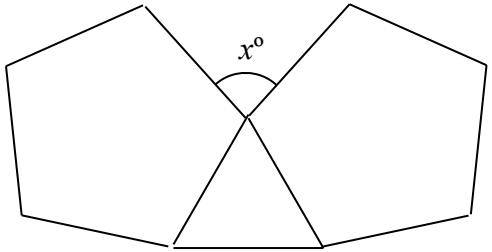
POLYGONS

MULTI-STEP PROBLEMS

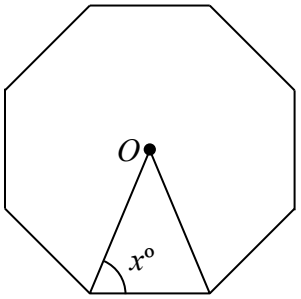
Ref: G424. 4C2

A1 The diagram shows an equilateral triangle and two regular pentagons.



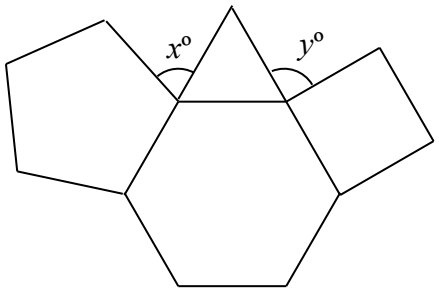
Work out the value of x.

A2 The diagram shows a regular octagon with centre O.



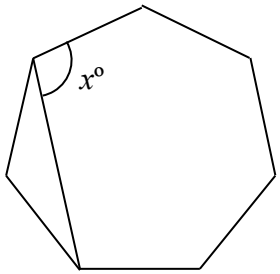
Work out the value of x.

A3 The diagram shows a regular hexagon, a regular pentagon, an equilateral triangle and a square.



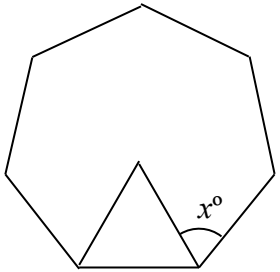
Work out the value of x and the value of y.

B1 The diagram shows a regular heptagon.



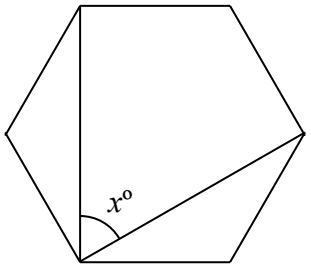
Find the value of x.
Show clear working out.

B2 The diagram shows an equilateral triangle inside a regular heptagon.



Work out the value of x.

B3 The diagram shows a regular hexagon.



Find the value of x.
Show clear working out.

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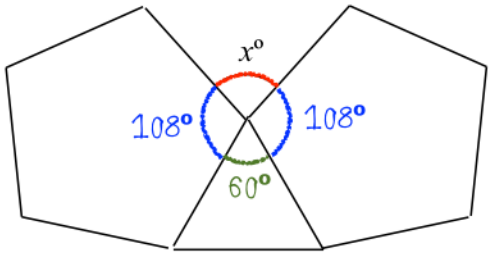
POLYGONS

MULTI-STEP PROBLEMS

Ref: G424. 4C2

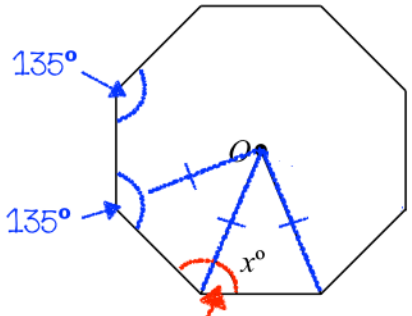
A1 The diagram shows an equilateral triangle and two regular pentagons.



$x = 360 - (108 + 60 + 108)$

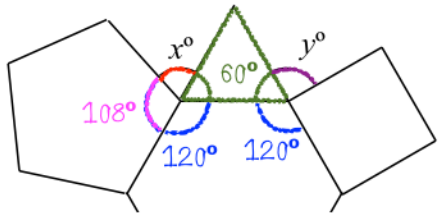
$= 84°$

A2 The diagram shows a regular octagon with centre O.



$\frac{135}{2} = 67.5°$

A3 The diagram shows a regular hexagon, a regular pentagon, an equilateral triangle and a square.



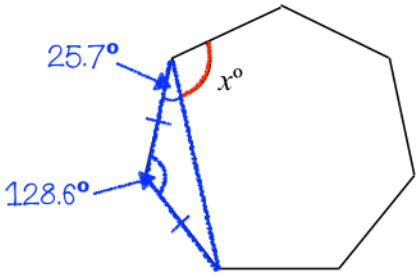
$x = 360 - (108 + 120 + 60)$

$= 72°$

$y = 360 - (90 + 120 + 60)$

$= 90°$

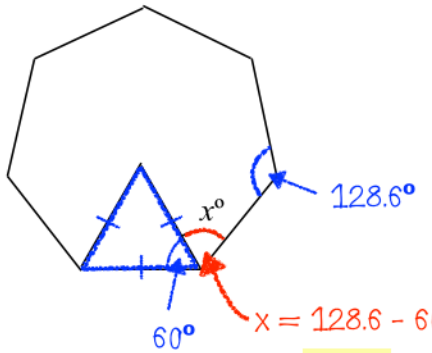
B1 The diagram shows a regular heptagon.



$x = 128.6 - 25.7$

$= 102.9°$

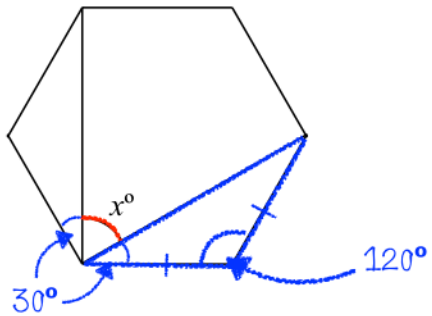
B2 The diagram shows an equilateral triangle inside a regular heptagon.



$x = 128.6 - 60$

$= 68.6°$

B3 The diagram shows a regular hexagon.



$x = 120 - 2 \times 30$

$= 60°$

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