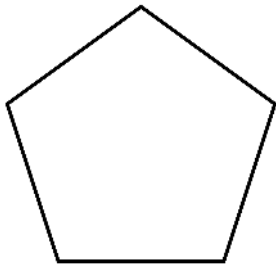


# QT - Angles in Polygons

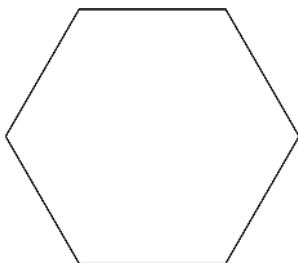


1. The diagrams show regular polygons. For each polygon work out the size of the exterior angle and the interior angle.



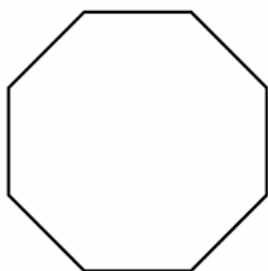
(a) Exterior angle = (2 marks)

(b) Interior angle = (2 marks)



(a) Exterior angle = (2 marks)

(b) Interior angle = (2 marks)



(a) Exterior angle = (2 marks)

(b) Interior angle = (2 marks)

# QT - Angles in Polygons



2. The interior angle of a regular polygon is  $135^\circ$ .

(a) Write down the size of the exterior angle of the polygon

(1 mark)

(b) Work out the number of sides of the polygon

(2 marks)

3. The diagram shows part of a regular decagon.

Work out the size of the angle marked  $x$ .



(3 marks)

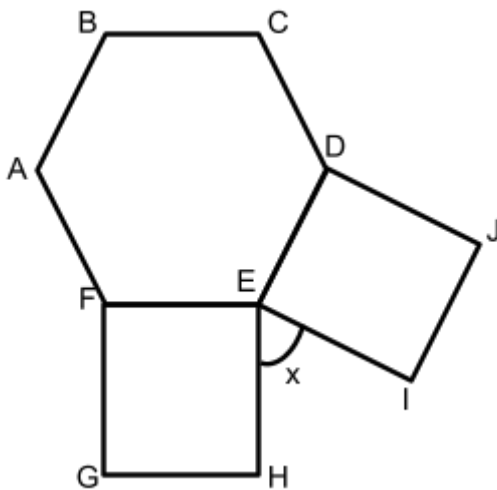
# QT - Angles in Polygons



4. The size of each exterior angle of a regular polygon is  $18^\circ$ .  
Work out how many sides the polygon has.

(2 marks)

5. ABCDEF is a regular hexagon. EFGH and DEIJ are squares. Angle HEI =  $x$ .  
Work out the value of  $x$ .

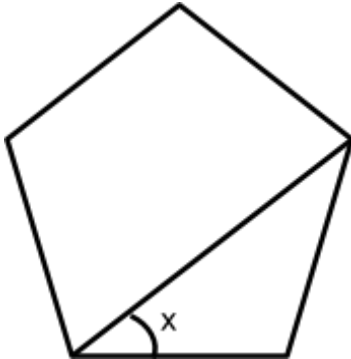


(4 marks)

# QT - Angles in Polygons

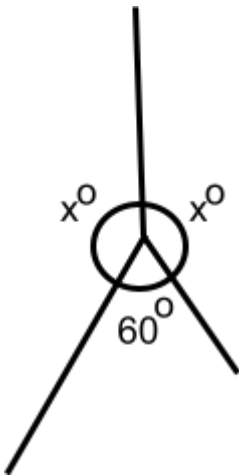


6. The diagram shows a regular pentagon. Find the value of  $x$ .



(3 marks)

7. Three regular polygons meet at a point. Find the number of sides of each of the three regular polygons in the diagram.



(5 marks)

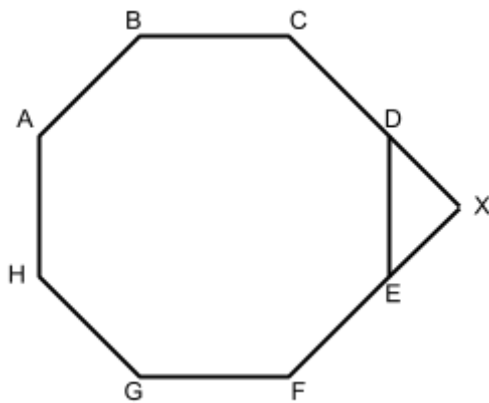
# QT - Angles in Polygons



8. A regular polygon has  $n$  sides. The polygons interior angle is eight times the size of its exterior angle. Work out how many sides the regular polygon has.

(4 marks)

9. ABCDEFGH is a regular octagon. CDX and FEX are straight lines. Work out the size of angle DXE. You must show how you got your answer.

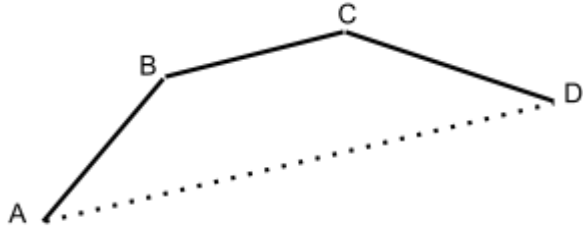


(4 marks)

# QT - Angles in Polygons

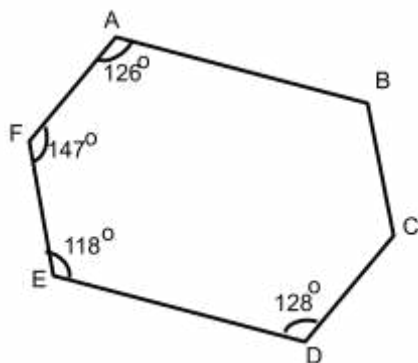


10. AB, BC and CD are three sides of a regular octagon. Work out the size of angle BAD.



(3 marks)

11. ABCDEF is a hexagon. Angle ABC = 2 x Angle BCD. Work out the size of angle BCD.



(not drawn to accurately)

(4 marks)