# ***Angles in polygons***

Exterior and interior angles of polygons

(1) sum of interior angles of n-sided polygon = (n – 2) × 180°

(2) Interior angle = 180° – exterior angle or (n – 2) /n × 180°

(3) Sum of exterior angles of polygon = 360°

(4) Each exterior angle of a polygon = 360°/ n

Q.1 Find the sum of interior angles of a five-sided polygon.

Q.2 Find sum of interior angles of a 7 sided polygon.

Q.3 Find sum of interior angles of a 6 sided polygon.

Q.4 Find sum of interior angles of a nonagon.

Q.5 Calculate the interior angle of a regular decagon.

Q.6 Calculate the interior angle of a regular octagon.

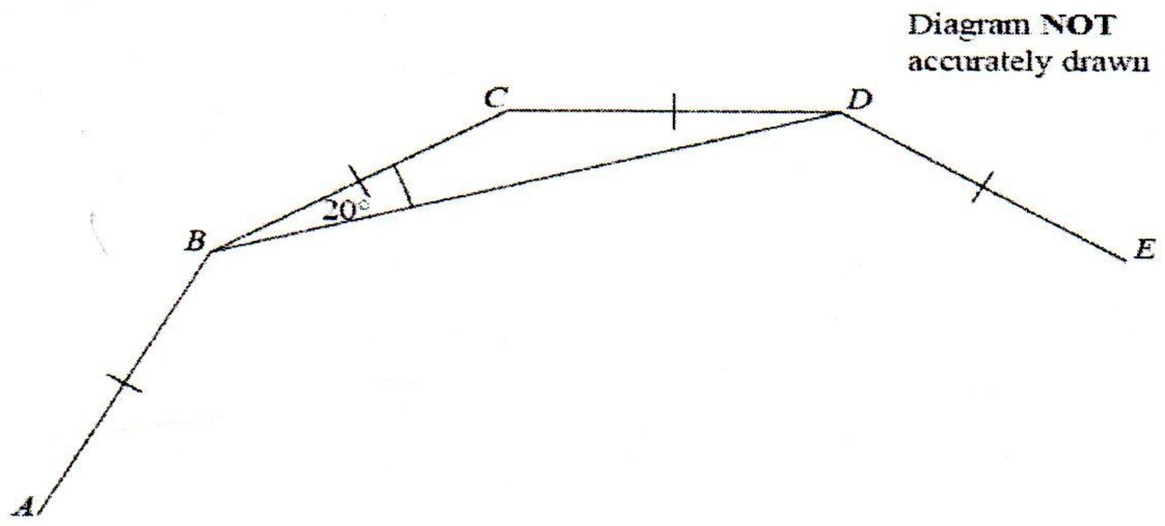
Q.7 Calculate the exterior angle of a regular decagon.

Q.8 The sum of interior angles of a regular polygon is 1260°, find how many sides it has?

Q.9 The sum of interior angles of on-sided polygon is 900°. Find its number of sides.

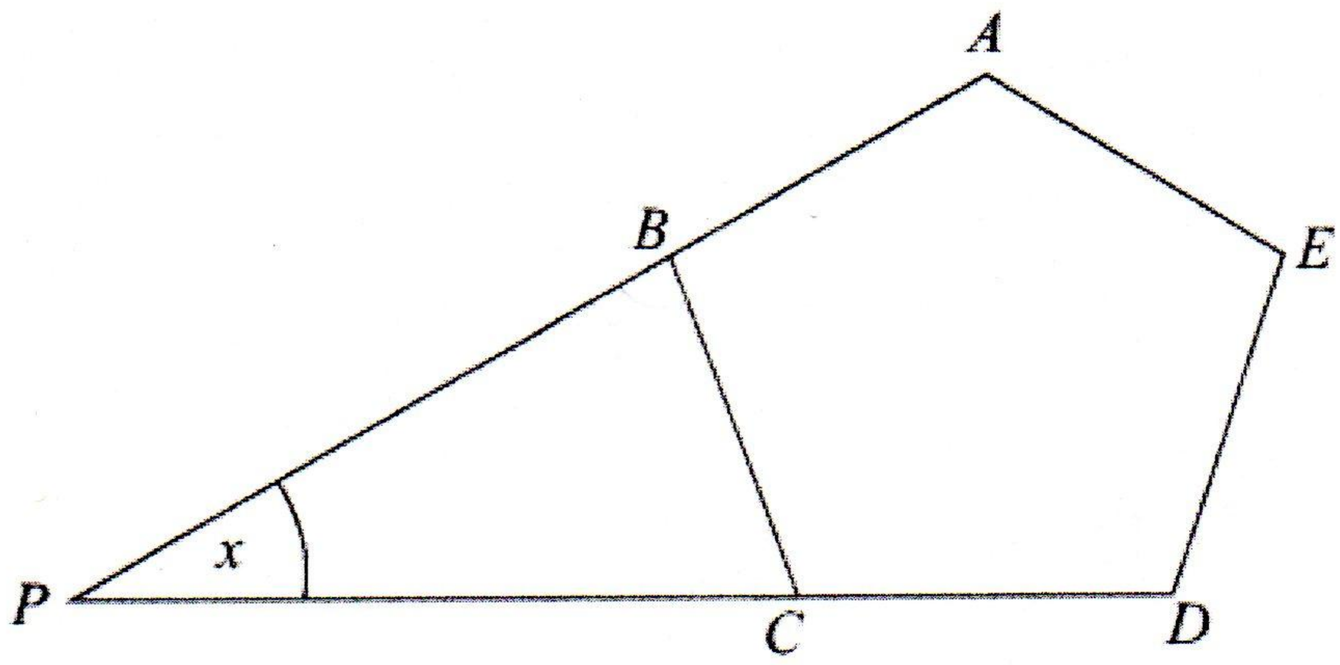
Q.10 The sum of interior angles of a regular polygon is 1440°. Find its number of sides and an exterior angle.

*Q11. AB, BC, CD* and *DE* are four sides of a regular polygon.
Angle *CBD* = 20°.

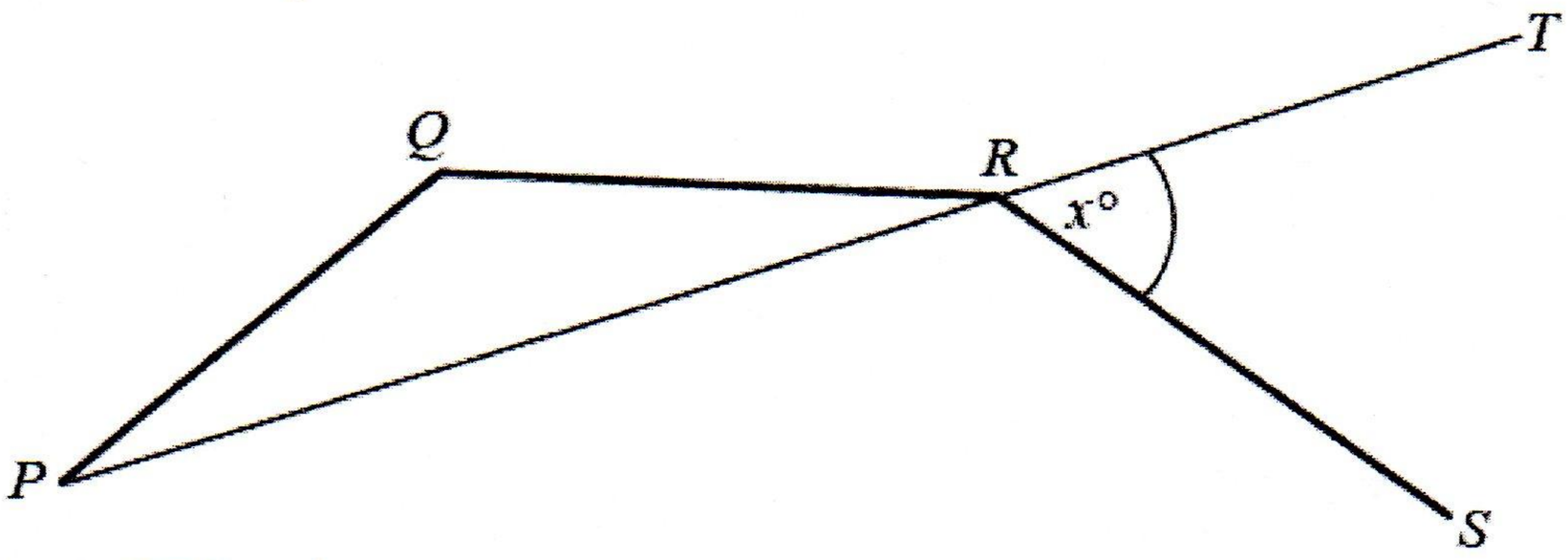



Work out the number of sides of this polygon.

*Q12. ABCDE* is a regular pentagon.
*PBA* and *PCD* are straight lines.
Work out the size of the angle marked *x*.




*Q13. PQ, QR* and *RS* are 3 sides of a regular decagon.
*PRT* is a straight line.




Angle *TRS* = *x*°
Work out the value of *x*
*x* = .....

Q14. Find the interior angle of regular Hexagon.

Q15. Find the interior angle of regular Heptagon.