Exterior Angles in Regular Polygons

(a) Find the size of one exterior angle in a regular pentagon.

(b) Find the size of one exterior angle in a regular octagon.

(c) Find the size of one exterior angle in a regular 12-sided polygon.

(d) Find the size of one exterior angle in a regular 20-sided polygon.

(a) $72°$

(b) $45°$

(c) $30°$

(d) $18°$

(a) A regular polygon has an interior angle of $144°$. Find the size of one exterior angle.

(b) A regular polygon has an interior angle of $120°$. Find the size of one exterior angle.

(c) A regular polygon has an interior angle of $156°$. Find the size of one exterior angle.

(a) $36°$

(b) $60°$

(c) $24°$

(a) A regular polygon has an exterior angle of $40°$. Find the number of sides the regular polygon has.

(b) A regular polygon has an exterior angle of $20°$. Find the number of sides the regular polygon has.

(c) A regular polygon has an exterior angle of $10°$. Find the number of sides the regular polygon has.

(a) 9

(b) 18

(c) 36

(a) The interior angle of a regular polygon is five times its exterior angle. Calculate the number of sides this regular polygon has.

(b) The exterior angle of a regular polygon is one quarter of the interior angle. Find the name of this regular polygon.

(c) The interior and exterior angle of a regular polygon are in the ratio $14 : 1$. Find the number of sides this regular polygon has.

(a) Exterior angle $= \frac{180}{6} = 30°$

12 sides

(b) Exterior angle $= \frac{180}{5} = 36°$

Decagon

(c) Exterior angle $= \frac{180}{15} = 12°$

30 sides