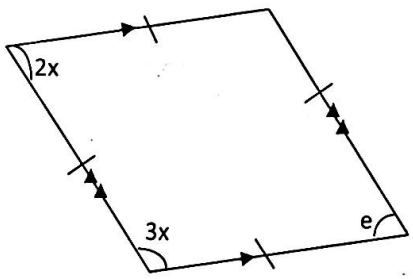
Lesson 54: Finding angles in quadrilaterals.

Example 1

Use the figure below to find the value of x and e.



(i) $2x + 3x = 180^0$ (co- interior ∠s)

$\frac{5x}{5} = \frac{180^0}{5}$

$\mathbf{x = 36^0}$

(ii) $3x + e = 180^0$ (co-interior ∠s)

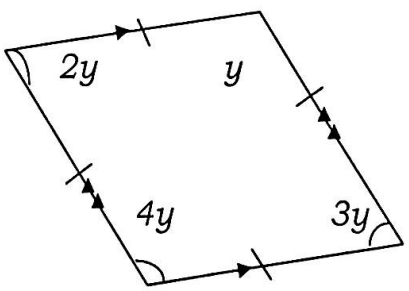
$3 \times 36^0 + e = 180^0$

$108^0 + e = 180^0$

$108^0 - 108^0 + e = 180^0 - 108^0$

$e = 72^0$

Example 2: *Find the value of y.*



$2y + 4y + y + 3y = 360^0$ (interior∠Sum of quadrilaterals)

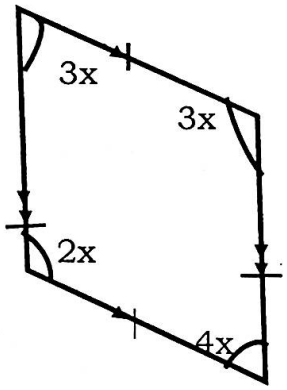
$\frac{10y}{10} = \frac{360^0}{10}$

$\mathbf{y = 36^0}$

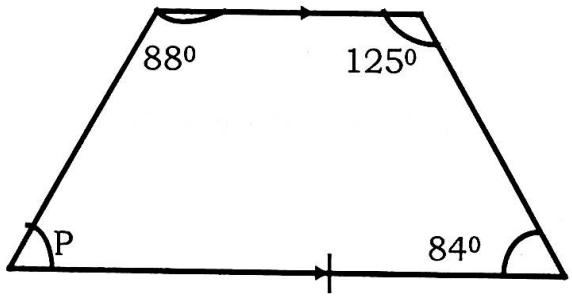
Activity.

1. Find the value of the unknown letter in the diagram below.

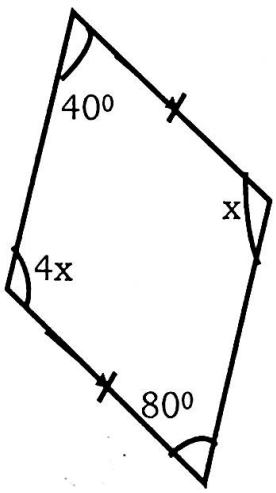
a)



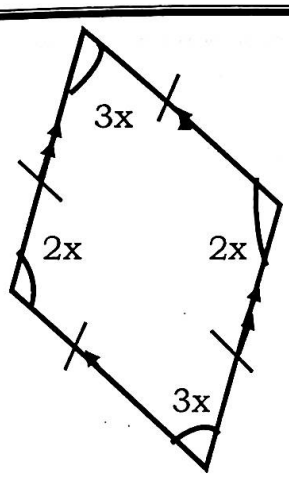
b)



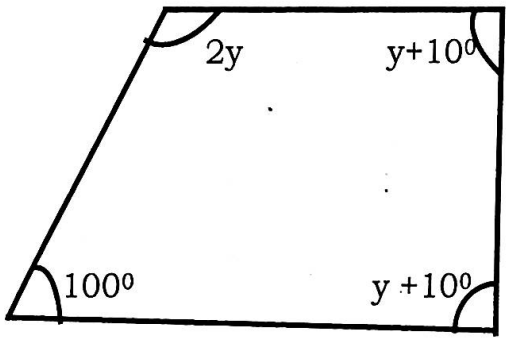
c)



d)



e)



Lesson 55: Finding the number of sides of regular polygon.

- *State the correct formula for finding number of sides of a regular polygon when exterior angle is given directly.*
- *Substitute correctly and operate accurately.*
- *Give the obtained number of sides.*

Example1: *The exterior angle of a regular polygon is 72^0. How many sides has the polygon?*

Number of sides $= \frac{\text{Sum of all exterior angles}}{\text{One exterior angle.}}$

Number of sides $= \frac{360^0}{72}$

$=$ **5 sides.**