



Exercise 17C

Q12

Answer :

$$\left(\begin{array}{c} a \\ 100 \end{array} \right)$$

$$x + y = 180 \text{ (linear pair)}$$

$$\Rightarrow x + \frac{4}{5}x = 180^\circ$$

$$\Rightarrow 9x = 5 \times 180$$

$$\Rightarrow x = 100$$

Q13

Answer :

$$\left(\begin{array}{l} b \end{array} \right) 50^{\circ}$$

Here, $\angle AOC$ and $\angle BOD$ are vertically opposite angles.

$$\therefore \angle AOC = \angle BOD$$

$$\text{Given, } \angle AOC = 50^{\circ}$$

$$\therefore \angle BOD = 50^{\circ}$$

Q14

Answer :

$$\left(\begin{array}{l} a \end{array} \right) 32$$

$$(3x - 8)^{\circ} + (x + 10)^{\circ} + 50^{\circ} = 180^{\circ} \text{ (linear pair)}$$

$$\Rightarrow 4x^{\circ} + 52^{\circ} = 180^{\circ}$$

$$\Rightarrow 4x^{\circ} = 128^{\circ}$$

$$\Rightarrow x^{\circ} = 32^{\circ}$$

$$\therefore x = 32$$

Q15

Answer :

$$\left(\begin{array}{c} a \end{array} \right) 32$$

$$\begin{aligned}(3x - 8)^{\circ} + (x + 10)^{\circ} + 50^{\circ} &= 180^{\circ} \text{ (linear pair)} \\ \Rightarrow 4x^{\circ} + 52^{\circ} &= 180^{\circ} \\ \Rightarrow 4x^{\circ} &= 128^{\circ} \\ \Rightarrow x^{\circ} &= 32^{\circ}\end{aligned}$$

$$\therefore x = 32$$

Q16

Answer :

$$\left(\begin{array}{c} c \end{array} \right) 100^{\circ}$$

$$\begin{aligned}\angle ACB &= \angle ABC + \angle BAC \text{ (exterior angle property)} \\ &= (45^{\circ} + 55^{\circ}) \\ &= 100^{\circ}\end{aligned}$$

Q17

Answer :

$$\left(\begin{array}{c} b \end{array} \right) 50^{\circ}$$

$$\begin{aligned}\angle BCA &= 180^{\circ} - 120^{\circ} \text{ (linear pair)} \\ &= 60^{\circ} \\ \angle BAC &= 180^{\circ} - (60^{\circ} + 70^{\circ}) \text{ (angle sum property of triangles)} \\ &= 50^{\circ}\end{aligned}$$

Q18

Answer :

$$\left(\begin{array}{c} c \end{array} \right) 150^{\circ}$$

$$\begin{aligned}x^{\circ} + 70^{\circ} + 50^{\circ} + 90^{\circ} &= 360^{\circ} \text{ (complete angle)} \\ \Rightarrow x^{\circ} &= 360^{\circ} - 210^{\circ} \\ &= 150^{\circ}\end{aligned}$$

***** END *****

