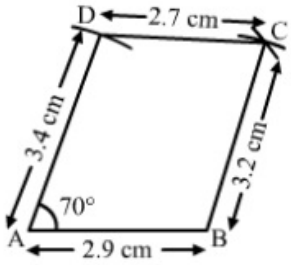
Exercise 17A



Q9

Answer :

Steps of construction:

Step 1: Draw $BC = 5cm$

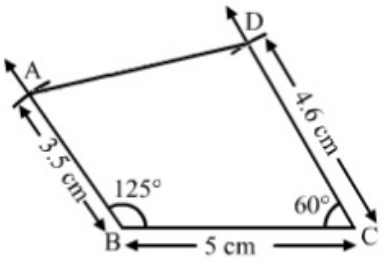
Step 2: Make $\angle B = 125^\circ$ *and* $\angle C = 60^\circ$

Step 3: With *B* as the centre, draw an arc of $3.5\ cm$. Name that point as *A*.

Step 4: With *C* as the centre, draw an arc of $4.6\ cm$. Name that point as *D*.

Step 5: Join *A* and *D*.

Then, $ABCD$ is the required quadrilateral.



Q10

Answer :

Steps of construction:

Step 1: Draw $QR = 5.6\ cm$

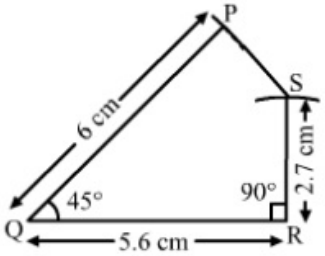
Step 2: Make $\angle Q = 45^\circ$ and $\angle R = 90^\circ$

Step 3: With *Q* as the centre, draw an arc of $6\ cm$. Name that point as *P*.

Step 4: With *R* as the centre, draw an arc of $2.7cm$. Name that point as *S*.

Step 6: Join *P* and *S*.

Then, $PQRS$ is the required quadrilateral.



Q11

Answer :

Steps of construction:

Step 1: Draw *AB*= $5.6\ cm$

Step 2: Make $\angle A = 50^{\circ}\ and\ \angle B = 105^{\circ}$

Step 3: With *B* as the centre, draw an arc of $4cm$.

Step 3: Sum of all the angles of the quadrilateral is 360°.

$\angle A + \angle B + \angle C + \angle D = 360^{\circ}$

$50^{\circ} + 105^{\circ} + \angle C + 80^{\circ} = 360^{\circ}$

$235^{\circ} + \angle C = 360^{\circ}$

$\angle C = 360^{\circ} - 235^{\circ}$

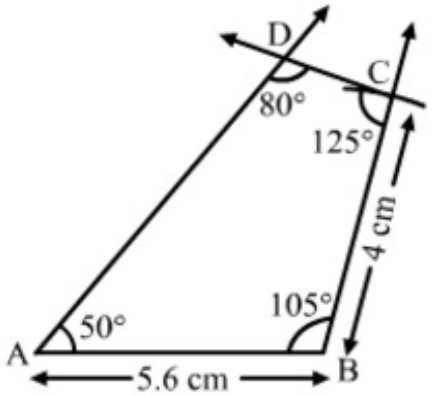
$\angle C = 125^{\circ}$

Step 5: With *C* as the centre, make $\angle C\ \mathbf{equal\ to}\ \angle 125^{\circ}$

Step 6: Join *C* and *D*.

Step 7: Measure $\angle D = 80^{\circ}$

Then, $ABCD$ is the required quadrilateral.



Q12

Steps of construction:

Step 1: Draw *PQ*= $5cm$

Step 2:

$\angle P + \angle Q + \angle R + \angle S = 360^{\circ}$

$100^{\circ} + \angle Q + 100^{\circ} + 75^{\circ} = 360^{\circ}$

$275^{\circ} + \angle Q = 360^{\circ}$

$\angle Q = 360^{\circ} - 275^{\circ}$

$\angle Q = 85^{\circ}$

Step 3: Make $\angle P = 100^{\circ}\ and\ \angle Q = 85^{\circ}$

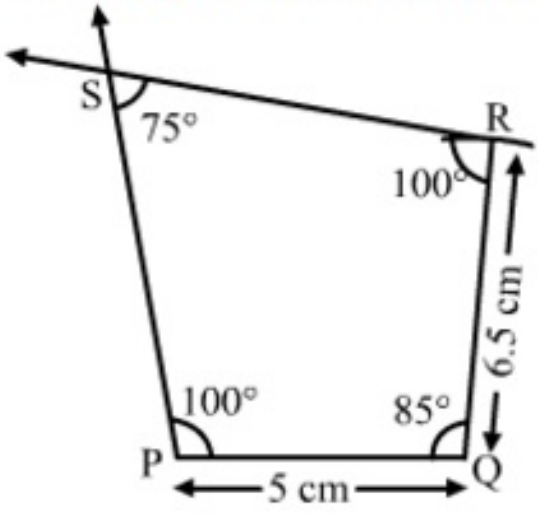
Step 3: With *Q* as the centre, draw an arc of $6.5\ cm$.

Step 4: Make $\angle R = 100^{\circ}$

Step 6: Join *R* and *S*.

Step 7: Measure $\angle S = 75^{\circ}$

Then, $PQRS$ is the required quadrilateral.



Q13

Answer :

Steps of construction:

Step 1: Draw $AB = 4cm$

Step 2: $Make\ \angle B = 90^o$

Step 3: $AC^2 = AB^2 + BC^2$

$5^2 = 4^2 + BC^2$

$25 - 16 = BC^2$

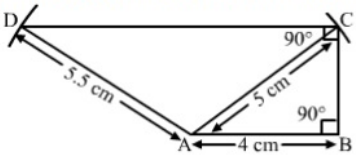
$BC = 3cm$

With *B* as the centre, draw an arc equal to 3 cm.

Step 4: Make $\angle C = 90^o$

Step 5: With *A* as the centre and radius equal to $5.5\ cm$, draw an arc and name that point as *D*.

Then, $ABCD$ is the required quadrilateral.



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