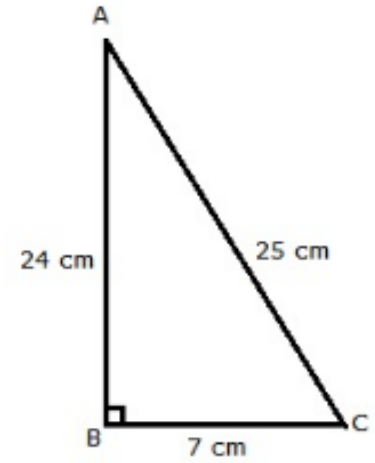
Question 18

Given: ΔABC in which ∠B = 900, AB = 24 cm and BC = 7cm



By Pythagoras theorem, we have

$$\Rightarrow \quad (AC)^2 = \left[(24)^2 + (7)^2\right] cm^2$$

$$(AC)^2 = (576 + 49)\, cm^2$$

$$(AC)^2 = 625 cm^2$$

$$\Rightarrow \quad AC = 25\, cm$$

(i) For T-ratio of $\angle A$, we have

Base AB= 24cm

Perpendicular BC = 7cm

Hypotenuse AC = 25cm

$$\cos A = \frac{AB}{AC} = \frac{24}{25}, \sin A = \frac{BC}{AC} = \frac{7}{25}$$

(ii) For T-ratio of $\angle C$, we have

Base BC = 7 cm

Perpendicular AB = 24cm

Hypotenuse AC = 25cm

$$\therefore \sin C = \frac{AB}{AC} = \frac{24}{25}, \cos C = \frac{BC}{AC} = \frac{7}{25}$$

********** END **********