

class VII, ex 15D, Page 4

Solutions by Dev Anoop

7(ii) $a = 9\text{ cm}$, $b = 12\text{ cm}$, $c = 16\text{ cm}$
 $c^2 - b^2 = 16^2 - 12^2$
 $= (16 - 12)(16 + 12)$ [$\because a^2 - b^2 = (a - b)(a + b)$]
 $= 4 \times 28$
 $= 112$
 $a^2 = 9^2$
 $= 81$
 $\therefore a^2 \neq c^2 - b^2$
 $\therefore 9, 12, 16$ are not sides of a right Δ

7(iii) $a = 10\text{ cm}$, $b = 24\text{ cm}$, $c = 26\text{ cm}$
 $c^2 - b^2 = 26^2 - 24^2$
 $= (26 - 24)(26 + 24)$ [$\because a^2 - b^2 = (a - b)(a + b)$]
 $= 2 \times 50$
 $= 100$
 $a^2 = 10^2$
 $= 100$
 $\therefore a^2 = c^2 - b^2$
 $\therefore 10, 24, 26$ are sides of a right Δ by converse of pythagoras theorem

8 In ΔABC ,

$$\angle A + \angle B + \angle C = 180^\circ \text{ [angle sum prop. of } \Delta \text{]}$$

$$\Rightarrow \angle A + 35^\circ + 55^\circ = 180^\circ$$

$$\Rightarrow \angle A = 180^\circ - 90^\circ$$

$= 90^\circ$ $\therefore ABC$ is a right Δ
hypotenuse is BC

$$BC^2 = AB^2 + AC^2 \text{ (Pythagoras theorem)}$$

