

class VII, ex 15D, Page 3

Solutions by Dev Anoop

⑥ Sol In rt $\triangle BCA$
 $h^2 = a^2 + b^2$ (pythagoras theorem)

$$= 6^2 + 4.5^2$$

$$= 36 + 20.25$$

$$= 56.25$$

$$h = \sqrt{56.25}$$

$$= \sqrt{\frac{5625}{100}}$$

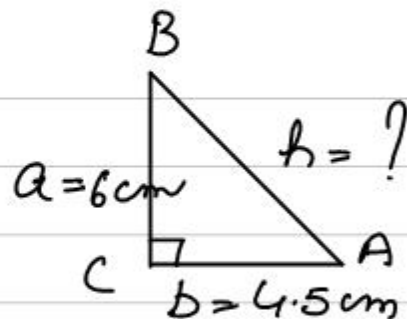
$$= \sqrt{\frac{5^2 \times 5^2 \times 3^2}{2^2 \times 5^2}}$$

$$= \frac{\sqrt{5^2 \times 5^2 \times 3^2}}{\sqrt{2^2 \times 5^2}}$$

$$= \frac{5 \times 5 \times 3}{2 \times 5}$$

$$= \frac{75}{10}$$

$$= 7.5 \text{ cm}$$



$$\begin{array}{r} 5 \overline{) 5625} \\ \underline{5 125} \\ 5 225 \\ \underline{5 45} \\ 3 9 \\ \underline{3 0} \end{array}$$

7① $a = 15 \text{ cm}$, $b = 20 \text{ cm}$, $c = 25 \text{ cm}$

$$c^2 - b^2 = 25^2 - 20^2$$

$$= (25 - 20)(25 + 20) \quad [\because a^2 - b^2 = (a - b)(a + b)]$$

$$= 5 \times 45$$

$$= 225$$

$$a^2 = 15^2$$

$$= 225$$

$$\therefore a^2 = c^2 - b^2$$

$\therefore 15, 20, 25$ are sides of a right \triangle by converse of pythagoras theorem.