

4(ii) let $a = 2\text{ cm}$, $a = 2\text{ cm}$, $c = 5\text{ cm}$

$$\begin{aligned}a^2 + b^2 &= 2^2 + 2^2 \\ &= 4 + 4 \\ &= 8\end{aligned}$$

$$\begin{aligned}c^2 &= 5^2 \\ &= 25\end{aligned}$$

$$\therefore a^2 + b^2 \neq c^2$$

\therefore these cannot be sides of a right Δ

4(iii) let $a = 1.5\text{ cm}$, $b = 2\text{ cm}$, $c = 2.5\text{ cm}$

$$\begin{aligned}a^2 + b^2 &= 1.5^2 + 2^2 \\ &= 2.25 + 4\end{aligned}$$

$$= 6.25$$

$$c^2 = 2.5^2$$

$$= 6.25$$

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

\therefore 1.5, 2 cm, 2.5 cm can be sides of a right Δ , right angled opposite to 2.5 cm side by converse of pythagoras theorem.