

$$2 \text{ (ii) let } 2m = 14$$

$$\Rightarrow m = \frac{14}{2}$$

$$= 7$$

$$\begin{array}{l|l} m^2 - 1 = 7^2 - 1 & m^2 + 1 = 7^2 + 1 \\ = 49 - 1 & = 49 + 1 \\ = 48 & = 50 \end{array}$$

$$\text{let } m^2 - 1 = 14 \quad | \quad \text{let } m^2 + 1 = 14$$

$$\Rightarrow m^2 = 15 \quad | \quad \Rightarrow m^2 = 13$$

$\therefore m^2 - 1, m^2 + 1$ do not give integral values of m

\therefore required pythagorean

triplet 14, 48, 50

$$2 \text{ (iii) let } 2m = 16$$

$$\Rightarrow m = \frac{16}{2}$$

$$= 8$$

$$\begin{array}{l|l} m^2 - 1 = 8^2 - 1 & m^2 + 1 = 8^2 + 1 \\ = 64 - 1 & = 64 + 1 \\ = 63 & = 65 \end{array}$$

\therefore required Pythagorean triplet 16, 63, 65