

which term of the A.P. 1, 3, 5, 7, 9, ... is 65.

$$\begin{array}{l} a = 1, \quad d = 2 \\ t_n = 65, \quad n = ? \end{array} \left\{ \begin{array}{l} t_2 - t_1 \Rightarrow 3 - 1 = 2 \\ t_3 - t_2 \Rightarrow 5 - 3 = 2 \end{array} \right\}$$

$$\begin{array}{l} t_n = a + (n-1)d \\ \Rightarrow 65 = 1 + (n-1)2 \end{array} \left\{ \begin{array}{l} \Rightarrow 65 = 1 + 2n - 2 \\ \Rightarrow 65 - 1 + 2 = 2n \end{array} \right\} \Rightarrow 66 = 2n$$
$$\Rightarrow n = \frac{66}{2} = 33 \text{ Ans.}$$