

Chapter 04

LINEAR EQUATIONS IN TWO VARIABLES

Example:

Sum of two numbers is 23 and their difference is 7. Find the number.

Solution:

Step- 1: Let the 2 numbers be 'x' and 'y'

Step- 2: By given data,

$$x + y = 23 \rightarrow (1)$$

$$x - y = 7 \rightarrow (2)$$

Step- 3: Solve (1) and (2)

$$\begin{array}{r} x + y = 23 \\ (+) x - y = 7 \\ \hline 2x = 30 \end{array}$$

$$\Rightarrow x = \frac{30}{2} = 15$$

$$\Rightarrow \boxed{x = 15}$$

Step- 4: Substitute 'x' value in eqn(2)

$$15 - y = 7$$

$$\Rightarrow 15 - 7 = y$$

$$\Rightarrow \boxed{8 = y}$$

Step-5: The two numbers are 15 and 8.