

Ex 3.7 Question 1

$$1 \text{ (vi) } \frac{3}{2}x - \frac{5}{3}y = -2 \dots \text{ (i)}$$

$$\frac{x}{3} + \frac{y}{2} = \frac{13}{6} \dots \text{ (ii)}$$

$$(x6) \quad 2x + 3y = 13$$

$$\Rightarrow x = \frac{13 - 3y}{2} \dots \text{ (iii)}$$

Substituting value
of x from (iii) in (i)

$$\frac{3}{2} \left(\frac{13 - 3y}{2} \right) - \frac{5}{3}y = -2$$

$$(x12) \quad \overset{3}{12} \times \frac{3}{2} \left(\frac{13 - 3y}{2} \right) - \overset{4}{12} \times \frac{5}{3}y = -24$$

$$\Rightarrow 9(13 - 3y) - 20y = -24$$

$$\Rightarrow 117 - 27y - 20y = -24$$

$$\Rightarrow -47y = -24 - 117$$

$$\Rightarrow -47y = -141$$

$$\Rightarrow y = \frac{-141}{-47}$$

$$\Rightarrow y = 3$$

Subs value of y in (iii)

$$x = \frac{13 - 3 \times 3}{2}$$

$$= \frac{4}{2}$$

$$\therefore x = 2, y = 3$$