

Ex 3.7 Question 1

$$i \text{ (iv)} \quad 0.2x + 0.3y = 1.3$$

$$(\times 10) \quad 2x + 3y = 13 \dots \text{(i)}$$

$$0.4x + 0.5y = 2.3$$

$$(\times 10) \quad 4x + 5y = 23 \dots \text{(ii)}$$

$$\Rightarrow x = \frac{23 - 5y}{4} \dots \text{(iii)}$$

Subs. value of  $x$   
from (iii) in (i)

$$2 \left( \frac{23 - 5y}{4} \right) + 3y = 13$$

$$(x2) \quad 23 - 5y + 6y = 26$$

$$\Rightarrow y = 26 - 23$$

$$\Rightarrow y = 3$$

Subs. value of  $y$   
in (iii)

$$x = \frac{23 - 5 \times 3}{4}$$

$$= \frac{23 - 15}{4}$$

$$= \frac{8}{4}$$

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

$$i \text{ (v)} \quad \sqrt{2}x + \sqrt{3}y = 0 \dots \text{(i)}$$

$$\sqrt{3}x - \sqrt{8}y = 0 \dots \text{(ii)}$$

$$\Rightarrow x = \frac{\sqrt{8}}{\sqrt{3}}y \dots \text{(iii)}$$

Sub value of  $x$   
in eqn (i)

$$\sqrt{2} \times \frac{\sqrt{8}}{\sqrt{3}}y + \sqrt{3}y = 0$$

$$y \left( \frac{\sqrt{16}}{\sqrt{3}} + \sqrt{3} \right) = 0$$

$$\Rightarrow y = \frac{0}{\left( \frac{4}{\sqrt{3}} + \sqrt{3} \right)}$$

Subs. value of  $x$   
in (iii)

$$x = \frac{\sqrt{8}}{\sqrt{3}} \times 0$$

$$= 0$$

$$\therefore x = 0, y = 0$$