

$$(10) \frac{x}{10} + \frac{y}{5} - 1 = 0$$

$$(\times 10) x + 2y - 10 = 0 \dots (i)$$

$$\frac{x}{8} + \frac{y}{6} = 15$$

$$(\times 24) 3x + 4y = 360$$

$$\Rightarrow 3x + 4y - 360 = 0 \dots (ii)$$

$$(i) \times 3 - (ii)$$

$$3x + 6y - 30 = 0$$

$$3x + 4y - 360 = 0$$

$$- \quad - \quad +$$

$$2y + 330 = 0$$

$$\Rightarrow 2y = -330$$

$$\Rightarrow y = \frac{-330}{2}$$

sub. in eqn. (i)

$$x - 330 - 10 = 0$$

$$\Rightarrow x = 340$$

$$y = \lambda x + 5 \text{ (given)}$$

$$\text{Put } x = 340, y = -165$$

$$-165 = 340\lambda + 5$$

$$\Rightarrow \lambda = \frac{-170}{340}$$

$$\Rightarrow \lambda = -\frac{1}{2}$$

$$11 (i) 3x + y + 4 = 0$$

$$\Rightarrow y = -3x - 4$$

x	0	-1	-2
y	-4	-1	2

$$6x + y + 4 = 0$$

$$\Rightarrow y = -6x - 4$$

$$x \quad 0 \quad -1 \quad -2$$

$$y \quad -4 \quad 2 \quad 8$$

consistent

$$11 (ii) x - 2y = 6$$

$$\Rightarrow x = 6 + 2y$$

$$x \quad 6 \quad 0 \quad 4 \quad 18$$

$$y \quad 0 \quad -3 \quad -1 \quad 6$$

$$3x - 6y = 0$$

$$\Rightarrow x = 2y$$

x	0	2	4	18
y	0	1	2	6

Inconsistent