

$$\begin{array}{ll}
 1) \text{ i) } x^2 - 8x + 15 = 0 & (x-3)(x-5) = 0 \\
 \text{ii) } x^2 - 225 = 0 & (x-15)(x+15) = 0 \\
 \text{iii) } x^2 + 11x + 30 = 0 & (x+5)(x+6) = 0 \\
 \text{iv) } x^2 - 6x + 8 = 0 & (x-2)(x-4) = 0 \\
 \text{v) } 2x^2 + 9x + 7 = 0 & (2x+7)(x+1) = 0
 \end{array}$$

$$2) \quad x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$$

$$12x^2 + 5x = 7$$

$$12x^2 + 5x - 7 = 0$$

$$x = \frac{-5 \pm 18.84}{24}$$

$$\boxed{x = 0.58}$$

$$x = \frac{-5 \pm \sqrt{(5)^2 - 4(12)(-7)}}{2(12)}$$

$$x = \frac{-5 \pm \sqrt{25 + 336}}{24}$$

$$x = \frac{-5 \pm \sqrt{361}}{24}$$

$$x = \frac{-5 \pm 18.84}{24}$$

$$x = \frac{-5 - 18.84}{24}$$

$$\boxed{x = -0.99}$$

$$3) \text{ i) } 5x + 2y = 22$$

$$\text{ii) } 4x + 3y = 19$$

$$15x + 6y = 66 \text{ (iii)}$$

$$8x + 6y = 38 \text{ (iv)}$$

$$23x = 104$$

$$x = \frac{104}{23}$$

$$\boxed{x = 4.52}$$

$$5(4.52) + 2y = 22$$

$$22.6 + 2y = 22$$

$$2y = 22 - 22.6$$

$$y = \frac{0.6}{2}$$