

3)

$$\begin{aligned} \text{i) } x^2 + 10x + 21 &= 0 \\ &= (x+7)(x+3) \\ x &= 7 \quad x = 3 \end{aligned}$$

$$\begin{aligned} \text{ii) } x^2 - 3x + 2 &= 0 \\ &= (x-1)(x-2) \\ x &= 1 \quad x = 2 \end{aligned}$$

$$\begin{aligned} \text{iii) } x^2 + 12x + 20 &= 0 \\ &= (x+4)(x+5) \\ x &= 4 \quad x = 5 \end{aligned}$$

$$\begin{aligned} \text{iv) } x^2 - 64 &= 0 \\ &= x^2 - 0x - 64 \\ &= (x+8)(x-8) \\ x &= 8 \quad x = -8 \end{aligned}$$

$$\begin{aligned} \text{v) } 2x^2 + 9x + 10 &= 0 \\ &= (2x+5)(x+2) \\ x &= -\frac{5}{2} \quad x = -2 \end{aligned}$$