

d)

$$\begin{aligned} \text{i)} \quad & x^2 + 14x + 10 \\ & (x+10)(x+4) = 0 \\ & x = -10 \quad x = -4 \end{aligned}$$

$$\begin{aligned} \text{ii)} \quad & x^2 - 5x + 6 \\ & (x-3)(x-2) = 0 \\ & x = 3 \quad x = 2 \end{aligned}$$

$$\begin{aligned} \text{iii)} \quad & x^2 + 8x = 4 \\ & x^2 + 8x - 4 = 0 \\ & (x+4)(x-1) \\ & x = -4 \quad x = 1 \end{aligned}$$

~~iii)~~

$$\begin{aligned} \text{iv)} \quad & x^2 - 225 = 0 \\ & (x-15)(x+15) \\ & x = 15 \quad x = -15 \end{aligned}$$

$$\begin{aligned} \text{e)} \quad & (x+2)^2 - x^2 = (x+5)(x+1) - x^2 \\ & (x+2)(x+2) - x^2 - 2 = x^2 + x + 5x + 5 - x^2 \\ & x^2 + 2x + 2x + 4 - x^2 - 2 = 6x + 5 \\ & 4x + 2 = 6x + 5 \\ & 0 = 2x + 3 \\ & -3/2 = x \end{aligned}$$