

2111 Utveckla och förenkla

$$\begin{aligned} \text{a)} \quad 5x^2 - 4(2x - 3)(x - 5) &= 5x^2 - 4(2x^2 - 10x - 3x + 15) \\ &= 5x^2 - 8x^2 + 52x - 60 \\ &= -3x^2 + 52x - 60 \end{aligned}$$

$$\text{b)} \quad 3(a-b)^2 - 2(a-b)^2 = (a-b)^2 = a^2 - 2ab + b^2$$

$$\begin{aligned} \text{c)} \quad (x-2)^3 &= (x-2)(x-2)^2 = (x-2)(x^2 - 4x + 4) \\ &= x^3 - 4x^2 + 4x - 2x^2 + 8x - 8 \\ &= x^3 - 6x^2 + 12x - 8 \end{aligned}$$

$$\begin{aligned} \text{d)} \quad (x-1)x + (x^2 - 2x - 4)(x+1) \\ &= x^2 - x + x^3 + x^2 - 2x^2 - 2x - 4x - 4 \\ &= x^3 - 7x - 4 \end{aligned}$$