

$$\begin{aligned} \mathbf{68 \ a)} & (2x-3)(22x-3)+(2x-3)(-24x+5) \\ & = -2(2x-3)(x-1) \end{aligned}$$

$$\begin{aligned} \mathbf{b)} & (15x+7)(5-x)+(12x+3)(15x+7) \\ & = (15x+7)(11x+8) \end{aligned}$$

$$\begin{aligned} \mathbf{c)} & (7x-24)(11x+8)+(7x-24)(12x+4) \\ & = (7x-24)(23x+12) \end{aligned}$$

$$\begin{aligned} \mathbf{69 \ a)} & (3x-11)(3x-4)-(5x+4)(3x-11) \\ & = -2(3x-11)(x+4) \end{aligned}$$

$$\begin{aligned} \mathbf{b)} & (14t+5)(-5t+2)-(8t-15)(14t+5) \\ & = (14t+5)(-13t+17) \end{aligned}$$

$$\begin{aligned} \mathbf{c)} & (15x-2)(3x-7)-(15x-2)(-2x-1) \\ & = (15x-2)(5x-6) \end{aligned}$$

$$\begin{aligned} \mathbf{77 \ a)} & (x-4)^2 - 36 = (x-4)^2 - 6^2 \\ & = (x-4+6)(x-4-6) = (x+2)(x-10) \end{aligned}$$

$$\mathbf{b)} \quad y^2 - 5 = y^2 - (\sqrt{5})^2 = (y+\sqrt{5})(y-\sqrt{5})$$

$$\begin{aligned} \mathbf{c)} \quad 25 - (2-x)^2 & = 5^2 - (2-x)^2 \\ & = (5+2-x)(5-2+x) = (7-x)(3+x) \end{aligned}$$

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

$$\mathbf{79 \ a)} \quad 4(2x-3)(5x+12)$$

$$\mathbf{b)} \quad 2(3x-7)(x+1)$$

$$\mathbf{c)} \quad -6(5x+1)(x-2)$$

$$\mathbf{d)} \quad -5(2x-3)(2x+1)$$