

5

i.
$$\begin{aligned} 5x + 3y &= 39 \\ 8x - 2y &= 42 \end{aligned}$$

$$\begin{aligned} 2 \times (5x + 3y) &= 39 \times 2 \\ 3 \times (8x - 2y) &= 42 \times 3 \end{aligned}$$

$$\begin{aligned} 10x + 6y &= 78 \\ 24x - 6y &= 126 \end{aligned}$$

$$\begin{aligned} 34x &= 204 \\ x &= \frac{204}{34} \end{aligned}$$

$$x = 6$$

$$\begin{aligned} (5 \times 6) + 3y &= 39 \\ 30 + 3y &= 39 \\ 3y &= 39 - 30 \\ 3y &= 9 \\ y &= \frac{9}{3} \end{aligned}$$

$$y = 3$$

6.

i.
$$\begin{aligned} &5(2x^2 - y^2) - x^2(x^2 - y) - x^2y - x^4 \\ &= 10x^2 - 5y^2 - x^4 + x^2y - x^2y - x^4 \\ &= 10x^2 - 5y^2 - 2x^4 \end{aligned}$$