



Exercise 2G

Question 47:

Let $x - 2y = z$

Then, $7(x - 2y)^2 - 25(x - 2y) + 12$

$$\begin{aligned} &= 7z^2 - 25z + 12 \\ &= 7z^2 - 21z - 4z + 12 \\ &= 7z(z - 3) - 4(z - 3) \\ &= (z - 3)(7z - 4) \end{aligned}$$

Now replace z by $(x - 2y)$, we get

$$\begin{aligned} &7(x - 2y)^2 - 25(x - 2y) + 12 \\ &= (x - 2y - 3)[7(x - 2y) - 4] \\ &= (x - 2y - 3)(7x - 14y - 4). \end{aligned}$$

Question 48:

Let $x^2 = y$

Then, $4x^4 + 7x^2 - 2$

$$\begin{aligned} &= 4y^2 + 7y - 2 \\ &= 4y^2 + 8y - y - 2 \\ &= 4y(y + 2) - 1(y + 2) \\ &= (y + 2)(4y - 1) \end{aligned}$$

Now replacing y by x^2 , we get

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

***** END *****