



Exercise 2G

Question 35:

$$\begin{aligned}\frac{1}{3}x^2 - 2x - 9 &= \frac{1}{3}x^2 - 3x + x - 9 \\&= x\left(\frac{x}{3} - 3\right) + (x - 9) \\&= \frac{x}{3}(x - 9) + (x - 9) \\&= (x - 9)\left(\frac{x}{3} + 1\right) \\&= (x - 9)\frac{(x + 3)}{3} = \frac{1}{3}(x - 9)(x + 3).\end{aligned}$$

Question 36:

$$\begin{aligned}x^2 - 2x + \frac{7}{16} &= \frac{1}{16}(16x^2 - 32x + 7) \\&= \frac{1}{16}(16x^2 - 4x - 28x + 7) \\&= \frac{1}{16}[4x(4x - 1) - 7(4x - 1)] \\&= \frac{1}{16}(4x - 1)(4x - 7).\end{aligned}$$

Question 37:

$$\begin{aligned}\sqrt{2}x^2 + 3x + \sqrt{2} &= \sqrt{2}x^2 + x + 2x + \sqrt{2} \\&= x(\sqrt{2}x + 1) + \sqrt{2}(\sqrt{2}x + 1) \\&= (\sqrt{2}x + 1)(x + \sqrt{2}).\end{aligned}$$

Question 38:

$$\begin{aligned}\sqrt{5}x^2 + 2x - 3\sqrt{5} &= \sqrt{5}x^2 + 5x - 3x - 3\sqrt{5} \\&= \sqrt{5}x(x + \sqrt{5}) - 3(x + \sqrt{5}) \\&= (\sqrt{5}x - 3)(x + \sqrt{5}).\end{aligned}$$

\*\*\*\*\* END \*\*\*\*\*