

Brackets and factorising – Lesson 17 – ANSWERS

$$\begin{aligned} \mathbf{1)} \quad & 2x^2 + 12x + 16 \\ & = 2(x^2 + 6x + 8) \\ & = 2(x + 2)(x + 4) \end{aligned}$$

$$\begin{aligned} \mathbf{2)} \quad & 4x^2 - 28x + 48 \\ & = 4(x^2 - 7x + 12) \\ & = 4(x - 3)(x - 4) \end{aligned}$$

$$\begin{aligned} \mathbf{3)} \quad & 6x^2 - 24 \\ & = 6(x^2 - 4) \\ & = 6(x + 2)(x - 2) \end{aligned}$$

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

$$\begin{aligned} \mathbf{5)} \quad & 5x^2 - 80 \\ & = 5(x^2 - 16) \\ & = 5(x + 4)(x - 4) \end{aligned}$$

$$\begin{aligned} \mathbf{6)} \quad & 4x^2 + 8x - 32 \\ & = 4(x^2 + 2x - 8) \\ & = 4(x + 4)(x - 2) \end{aligned}$$

$$\mathbf{7)} \quad 2x^2 + 7x + 6 = (2x + 3)(x + 2)$$

$$\mathbf{8)} \quad 3x^2 + 14x + 8 = (3x + 2)(x + 2)$$

$$\mathbf{9)} \quad 5x^2 + 9x + 4 = (5x + 4)(x + 1)$$

$$\mathbf{10)} \quad 7x^2 + 24x + 9 = (7x + 3)(x + 3)$$

$$\mathbf{11)} \quad 5x^2 + 29x + 20 = (5x + 4)(x + 5)$$

$$\mathbf{12)} \quad 3x^2 + 13x + 12 = (3x + 4)(x + 3)$$

$$\mathbf{13)} \quad 2x^2 + 5x - 3 = (2x - 1)(x + 3)$$

$$\mathbf{14)} \quad 3x^2 - 2x - 5 = (-5)(x + 1)$$

$$\mathbf{15)} \quad 5x^2 + 3x - 2 = (5x - 2)(x + 1)$$

$$\mathbf{16)} \quad 3x^2 + 11x - 4 = (3x - 1)(x + 4)$$

$$\mathbf{17)} \quad 5x^2 + 13x - 6 = (5x - 2)(x + 3)$$

$$\mathbf{18)} \quad 7x^2 - 26x - 8 = (7x + 2)(x - 4)$$