

Simplifying Products Answers

Simplify each product.

$$\begin{aligned} 1. & (m + n)(m + n) \\ & = m^2 + mn + mn + n^2 \\ & = m^2 + 2mn + n^2 \end{aligned}$$

$$\begin{aligned} 2. & (3x + 4)(x - 5) \\ & = 3x^2 - 15x + 4x - 20 \\ & = 3x^2 - 11x - 20 \end{aligned}$$

$$\begin{aligned} 3. & (-6 - 4b)(b + 7) \\ & = -6b - 42 - 4b^2 - 28b \\ & = -4b^2 - 34b - 42 \end{aligned}$$

$$\begin{aligned} 4. & (19y - 10)(8y - 24) \\ & = 152y^2 - 456y - 80y + 240 \\ & = 152y^2 - 536y + 240 \end{aligned}$$

$$\begin{aligned} 5. & (2x + 3)(x^2 + 3) \\ & = 2x^3 + 6x + 3x^2 + 9 \\ & = 2x^3 + 3x^2 + 6x + 9 \end{aligned}$$

$$\begin{aligned} 6. & (2g - h)(-p + 3q) \\ & = -2gp + 6gq + hp - 3hq \end{aligned}$$

$$\begin{aligned} 7. & (3x)(x^2 - 2x + 5) \\ & = 3x^3 - 6x^2 + 15x \end{aligned}$$

$$\begin{aligned} 8. & (5x + 9)(x^3 + 2x^2 + 5) \\ & = 5x^4 + 10x^3 + 25x + 9x^3 + 18x^2 + 45 \\ & = 5x^4 + 19x^3 + 18x^2 + 25x + 45 \end{aligned}$$

$$\begin{aligned} 9. & (x^2 - 3y)(y^2 + x) \\ & = x^2y^2 + x^3 - 3y^3 - 3xy \end{aligned}$$

$$\begin{aligned} 10. & (x^2 + 4x - 6)(2x^2 + 8x + 1) \\ & = 2x^4 + 8x^3 + x^2 + 8x^3 + 32x^2 + 4x - 12x^2 - 48x - 6 \\ & = 2x^4 + 16x^3 + 21x^2 - 44x - 6 \end{aligned}$$