

Multiplying Three Mon/Polynomials (J)

Simplify each expression.

1. $(-x^2 - 6x)(-2x^5 - 2x^4 - 2x^3)(5x^5 - 7x^4 + 4x^3)$

2. $(5g^3 + 2g^2 - g)(4g^4 - g^3)(-9g^3 - 5g^2)$

3. $(-9h^4 - 4h^3 + 8h^2)(-5h^5 + 3h^4 + 2h^3)(-3h^4 + 2h^3 - h^2)$

4. $(-7x^3 + 2x^2 + 5x)(9x^5 - 9x^4 + 8x^3)(5x^2 - 4x - 3)$

5. $(2a^4 + 9a^3 - 7a^2)(8a^3 + 6a^2)(-9a^5 + 3a^4)$

Multiplying Three Mon/Polynomials (J) Answers

Simplify each expression.

$$\begin{aligned} 1. & (-x^2 - 6x)(-2x^5 - 2x^4 - 2x^3)(5x^5 - 7x^4 + 4x^3) \\ & = 10x^{12} + 56x^{11} - 20x^{10} + 18x^9 - 28x^8 + 48x^7 \end{aligned}$$

$$\begin{aligned} 2. & (5g^3 + 2g^2 - g)(4g^4 - g^3)(-9g^3 - 5g^2) \\ & = -180g^{10} - 127g^9 + 39g^8 + 21g^7 - 5g^6 \end{aligned}$$

$$\begin{aligned} 3. & (-9h^4 - 4h^3 + 8h^2)(-5h^5 + 3h^4 + 2h^3)(-3h^4 + 2h^3 - h^2) \\ & = -135h^{13} + 111h^{12} + 151h^{11} - 181h^{10} + 54h^9 + 16h^8 - 16h^7 \end{aligned}$$

$$\begin{aligned} 4. & (-7x^3 + 2x^2 + 5x)(9x^5 - 9x^4 + 8x^3)(5x^2 - 4x - 3) \\ & = -315x^{10} + 657x^9 - 280x^8 - 272x^7 + 403x^6 - 73x^5 - 120x^4 \end{aligned}$$

$$\begin{aligned} 5. & (2a^4 + 9a^3 - 7a^2)(8a^3 + 6a^2)(-9a^5 + 3a^4) \\ & = -144a^{12} - 708a^{11} + 270a^{10} + 372a^9 - 126a^8 \end{aligned}$$