

## Multiplying Two Binomials by a Trinomial (C)

Simplify each expression.

1.  $(z^2 - 5z)(-5z^2 + 7z)(7z^3 + 9z^2 - 2z)$

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

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

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

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

## Multiplying Two Binomials by a Trinomial (C) Answers

Simplify each expression.

$$\begin{aligned} 1. & (z^2 - 5z)(-5z^2 + 7z)(7z^3 + 9z^2 - 2z) \\ & = -35z^7 + 179z^6 + 53z^5 - 379z^4 + 70z^3 \end{aligned}$$

$$\begin{aligned} 2. & (3v^3 - 5v^2)(v^5 + 7v^4)(3v^4 + 9v^3 + 2v^2) \\ & = 9v^{12} + 75v^{11} + 45v^{10} - 283v^9 - 70v^8 \end{aligned}$$

$$\begin{aligned} 3. & (-3g^4 - 8g^3)(4g^5 - 7g^4)(-3g^4 + 6g^3 - 5g^2) \\ & = 36g^{13} - 39g^{12} - 174g^{11} + 391g^{10} - 280g^9 \end{aligned}$$

$$\begin{aligned} 4. & (-7x^4 - 4x^3)(-x^4 + 2x^3)(-3x^2 + 2x - 9) \\ & = -21x^{10} + 44x^9 - 59x^8 + 74x^7 + 72x^6 \end{aligned}$$

$$\begin{aligned} 5. & (5h^4 + 6h^3)(2h^2 + 5h)(-2h^2 + 7h - 9) \\ & = -20h^8 - 4h^7 + 109h^6 - 123h^5 - 270h^4 \end{aligned}$$