

Multiplying Two Binomials by a Trinomial (F)

Simplify each expression.

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

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

3. $(m - 2)(3m - 1)(-8m^2 + 9m - 7)$

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

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

Multiplying Two Binomials by a Trinomial (F) Answers

Simplify each expression.

$$\begin{aligned} 1. & (5w^2 + 2w)(-7w^5 - 5w^4)(-w^5 - 7w^4 - w^3) \\ & = 35w^{12} + 284w^{11} + 318w^{10} + 109w^9 + 10w^8 \end{aligned}$$

$$\begin{aligned} 2. & (-8n^2 + 6n)(7n^5 + 8n^4)(-2n^2 + 2n - 3) \\ & = 112n^9 - 68n^8 + 28n^7 + 162n^6 - 144n^5 \end{aligned}$$

$$\begin{aligned} 3. & (m - 2)(3m - 1)(-8m^2 + 9m - 7) \\ & = -24m^4 + 83m^3 - 100m^2 + 67m - 14 \end{aligned}$$

$$\begin{aligned} 4. & (9d^4 + 7d^3)(d^2 - 9d)(-8d^4 + 3d^3 - 7d^2) \\ & = -72d^{10} + 619d^9 + 219d^8 + 329d^7 + 441d^6 \end{aligned}$$

$$\begin{aligned} 5. & (2q^2 + 2q)(-3q + 1)(-7q^3 + 2q^2 + 3q) \\ & = 42q^6 + 16q^5 - 40q^4 - 8q^3 + 6q^2 \end{aligned}$$