

Multiplying a Binomial by Two Trinomials (B)

Simplify each expression.

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

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

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

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

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

Multiplying a Binomial by Two Trinomials (B) Answers

Simplify each expression.

$$\begin{aligned} 1. & (-2p^2 - 7p)(4p^5 - p^4 - 5p^3)(-5p^4 - 2p^3 - 5p^2) \\ & = 40p^{11} + 146p^{10} + 7p^9 - 79p^8 - 155p^7 - 175p^6 \end{aligned}$$

$$\begin{aligned} 2. & (2m^2 + 2m)(-9m^4 - 4m^3 + 8m^2)(-8m^3 + 2m^2 + m) \\ & = 144m^9 + 172m^8 - 134m^7 - 138m^6 + 40m^5 + 16m^4 \end{aligned}$$

$$\begin{aligned} 3. & (2t + 6)(-5t^3 - t^2 - 7t)(-t^4 - 5t^3 - 8t^2) \\ & = 10t^8 + 82t^7 + 260t^6 + 398t^5 + 370t^4 + 336t^3 \end{aligned}$$

$$\begin{aligned} 4. & (4z^5 - 8z^4)(-3z^2 + 6z + 4)(-5z^4 + 3z^3 - 3z^2) \\ & = 60z^{11} - 276z^{10} + 340z^9 - 80z^8 + 96z^6 \end{aligned}$$

$$\begin{aligned} 5. & (-c^4 - 9c^3)(5c^2 + 6c - 5)(-6c^4 + 7c^3 + 2c^2) \\ & = 30c^{10} + 271c^9 - 73c^8 - 715c^7 + 217c^6 + 90c^5 \end{aligned}$$