

Multiplying a Binomial by Two Trinomials (C)

Simplify each expression.

1. $(-8n - 1)(5n^4 + 7n^3 + 5n^2)(-4n^4 - 2n^3 + 2n^2)$

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

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

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

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

Multiplying a Binomial by Two Trinomials (C) Answers

Simplify each expression.

$$\begin{aligned} 1. & (-8n - 1)(5n^4 + 7n^3 + 5n^2)(-4n^4 - 2n^3 + 2n^2) \\ & = 160n^9 + 324n^8 + 230n^7 - 8n^6 - 84n^5 - 10n^4 \end{aligned}$$

$$\begin{aligned} 2. & (5n^2 + 7n)(5n^2 - 6n - 4)(7n^3 + 7n^2 + 7n) \\ & = 175n^7 + 210n^6 - 224n^5 - 595n^4 - 630n^3 - 196n^2 \end{aligned}$$

$$\begin{aligned} 3. & (-3f^4 - 7f^3)(2f^3 + 6f^2 + 4f)(-8f^2 + f - 5) \\ & = 48f^9 + 250f^8 + 430f^7 + 330f^6 + 242f^5 + 140f^4 \end{aligned}$$

$$\begin{aligned} 4. & (a + 8)(-9a^5 + 4a^4 - 6a^3)(9a^2 - 9a - 7) \\ & = -81a^8 - 531a^7 + 909a^6 - 190a^5 + 250a^4 + 336a^3 \end{aligned}$$

$$\begin{aligned} 5. & (8d^2 + 4d)(2d^3 - 3d^2 + d)(-9d^5 - 9d^4 - 7d^3) \\ & = -144d^{10} + 68d^8 + 112d^7 - 8d^6 - 28d^5 \end{aligned}$$