

Multiplying a Binomial by Two Trinomials (A)

Simplify each expression.

1. $(-5g - 6)(5g^4 - 4g^3 + 5g^2)(5g^3 + 8g^2 - 9g)$

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

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

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

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

Multiplying a Binomial by Two Trinomials (A) Answers

Simplify each expression.

$$\begin{aligned} 1. & (-5g - 6)(5g^4 - 4g^3 + 5g^2)(5g^3 + 8g^2 - 9g) \\ & = -125g^8 - 250g^7 + 140g^6 - 68g^5 - 231g^4 + 270g^3 \end{aligned}$$

$$\begin{aligned} 2. & (-2x^4 - 6x^3)(6x^3 - 2x^2 + x)(7x^3 + x^2 + 6x) \\ & = -84x^{10} - 236x^9 - 34x^8 - 224x^7 + 54x^6 - 36x^5 \end{aligned}$$

$$\begin{aligned} 3. & (4n + 3)(-8n^5 - 3n^4 - 6n^3)(-9n^3 - 7n^2 - n) \\ & = 288n^9 + 548n^8 + 581n^7 + 429n^6 + 159n^5 + 18n^4 \end{aligned}$$

$$\begin{aligned} 4. & (h^4 - 7h^3)(6h^3 + 5h^2 - 5h)(6h^2 - 6h - 3) \\ & = 36h^9 - 258h^8 - 36h^7 + 561h^6 - 90h^5 - 105h^4 \end{aligned}$$

$$\begin{aligned} 5. & (2r + 7)(r^2 - 9r - 5)(-7r^5 + 9r^4 + 5r^3) \\ & = -14r^8 + 95r^7 + 422r^6 - 467r^5 - 680r^4 - 175r^3 \end{aligned}$$