

## Multiplying Two Binomials by a Trinomial (A)

Simplify each expression.

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

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

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

4.  $(6f^4 + 7f^3)(-6f^4 + 7f^3)(-5f^2 + 2f - 1)$

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

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

Simplify each expression.

$$\begin{aligned} 1. & (-8m^3 + 2m^2)(-5m^4 - 3m^3)(-6m^5 + 9m^4 - m^3) \\ & = -240m^{12} + 276m^{11} + 122m^{10} - 68m^9 + 6m^8 \end{aligned}$$

$$\begin{aligned} 2. & (-4p^5 - 5p^4)(-4p - 7)(8p^5 + p^4 + 9p^3) \\ & = 128p^{11} + 400p^{10} + 472p^9 + 467p^8 + 315p^7 \end{aligned}$$

$$\begin{aligned} 3. & (-4g^2 + g)(6g^2 - 6g)(3g^3 + 3g^2 + 7g) \\ & = -72g^7 + 18g^6 - 96g^5 + 192g^4 - 42g^3 \end{aligned}$$

$$\begin{aligned} 4. & (6f^4 + 7f^3)(-6f^4 + 7f^3)(-5f^2 + 2f - 1) \\ & = 180f^{10} - 72f^9 - 209f^8 + 98f^7 - 49f^6 \end{aligned}$$

$$\begin{aligned} 5. & (-b - 5)(-7b^2 + 4b)(8b^3 - 9b^2 - 4b) \\ & = 56b^6 + 185b^5 - 467b^4 + 56b^3 + 80b^2 \end{aligned}$$