

# Multiplying a Binomial by a Trinomial (A)

Simplify each expression.

1.  $(6c^4 - c^3)(9c^3 - 7c^2 - 3c)$

2.  $(a^4 + 5a^3)(5a^4 - 4a^3 - 5a^2)$

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

4.  $(2q^2 - q)(2q^2 + 9q - 2)$

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

6.  $(-5b^2 - b)(9b^3 - b^2 - 2b)$

7.  $(-k + 8)(-2k^2 - 8k - 1)$

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

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

10.  $(2g^3 + g^2)(4g^3 - 7g^2 - 3g)$

## Multiplying a Binomial by a Trinomial (A) Answers

Simplify each expression.

$$\begin{aligned} 1. & (6c^4 - c^3)(9c^3 - 7c^2 - 3c) \\ & = 54c^7 - 51c^6 - 11c^5 + 3c^4 \end{aligned}$$

$$\begin{aligned} 2. & (a^4 + 5a^3)(5a^4 - 4a^3 - 5a^2) \\ & = 5a^8 + 21a^7 - 25a^6 - 25a^5 \end{aligned}$$

$$\begin{aligned} 3. & (7k^2 - 9k)(9k^4 - 2k^3 + 3k^2) \\ & = 63k^6 - 95k^5 + 39k^4 - 27k^3 \end{aligned}$$

$$\begin{aligned} 4. & (2q^2 - q)(2q^2 + 9q - 2) \\ & = 4q^4 + 16q^3 - 13q^2 + 2q \end{aligned}$$

$$\begin{aligned} 5. & (-8g^4 - 6g^3)(-9g^3 + 2g^2 + 7g) \\ & = 72g^7 + 38g^6 - 68g^5 - 42g^4 \end{aligned}$$

$$\begin{aligned} 6. & (-5b^2 - b)(9b^3 - b^2 - 2b) \\ & = -45b^5 - 4b^4 + 11b^3 + 2b^2 \end{aligned}$$

$$\begin{aligned} 7. & (-k + 8)(-2k^2 - 8k - 1) \\ & = 2k^3 - 8k^2 - 63k - 8 \end{aligned}$$

$$\begin{aligned} 8. & (-7s^4 - 6s^3)(8s^2 - 7s + 4) \\ & = -56s^6 + s^5 + 14s^4 - 24s^3 \end{aligned}$$

$$\begin{aligned} 9. & (z^4 + 3z^3)(6z^3 - 4z^2 + 4z) \\ & = 6z^7 + 14z^6 - 8z^5 + 12z^4 \end{aligned}$$

$$\begin{aligned} 10. & (2g^3 + g^2)(4g^3 - 7g^2 - 3g) \\ & = 8g^6 - 10g^5 - 13g^4 - 3g^3 \end{aligned}$$