

# Multiplying Monomials and Polynomials (A)

Simplify each expression.

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

2.  $(5g^4 + 5g^3)(5g^5 + 4g^4)$

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

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

5.  $(3y^3 + 6y^2)(-8y^2 + 9y)$

6.  $(-2w^3 + 6w^2 - 2w)(-3w^3 + 5w^2)$

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

8.  $(3m^4 + 5m^3)(-5m^4 + 5m^3)$

9.  $4q^4(4q + 1)$

10.  $(6w^4 + 6w^3)(9w^3 - w^2)$

# Multiplying Monomials and Polynomials (A) Answers

Simplify each expression.

$$\begin{aligned} 1. & (8v^2 + 2v)(-2v + 7) \\ & = -16v^3 + 52v^2 + 14v \end{aligned}$$

$$\begin{aligned} 2. & (5g^4 + 5g^3)(5g^5 + 4g^4) \\ & = 25g^9 + 45g^8 + 20g^7 \end{aligned}$$

$$\begin{aligned} 3. & (-8k^2 + 3k - 2)(8k^3 - 9k^2 - 4k) \\ & = -64k^5 + 96k^4 - 11k^3 + 6k^2 + 8k \end{aligned}$$

$$\begin{aligned} 4. & (-5a^5 - 5a^4 + 5a^3)(a^2 + 2a - 3) \\ & = -5a^7 - 15a^6 + 10a^5 + 25a^4 - 15a^3 \end{aligned}$$

$$\begin{aligned} 5. & (3y^3 + 6y^2)(-8y^2 + 9y) \\ & = -24y^5 - 21y^4 + 54y^3 \end{aligned}$$

$$\begin{aligned} 6. & (-2w^3 + 6w^2 - 2w)(-3w^3 + 5w^2) \\ & = 6w^6 - 28w^5 + 36w^4 - 10w^3 \end{aligned}$$

$$\begin{aligned} 7. & (-6f^3 - 5f^2)(7f^3 + 6f^2 - 5f) \\ & = -42f^6 - 71f^5 + 25f^3 \end{aligned}$$

$$\begin{aligned} 8. & (3m^4 + 5m^3)(-5m^4 + 5m^3) \\ & = -15m^8 - 10m^7 + 25m^6 \end{aligned}$$

$$\begin{aligned} 9. & 4q^4(4q + 1) \\ & = 16q^5 + 4q^4 \end{aligned}$$

$$\begin{aligned} 10. & (6w^4 + 6w^3)(9w^3 - w^2) \\ & = 54w^7 + 48w^6 - 6w^5 \end{aligned}$$