

Multiplying Monomials and Polynomials (F)

Simplify each expression.

1. $(-2w^2 + 7w)(2w^5 + 4w^4)$

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

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

4. $-4r^2(8r^4 + r^3)$

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

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

7. $(-8y^2 - 9y - 3)(-8y^2 - 5y)$

8. $-4c^4(6c + 1)$

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

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

Multiplying Monomials and Polynomials (F) Answers

Simplify each expression.

$$\begin{aligned} 1. & (-2w^2 + 7w)(2w^5 + 4w^4) \\ &= -4w^7 + 6w^6 + 28w^5 \end{aligned}$$

$$\begin{aligned} 2. & (-5v^4 - 3v^3 - 9v^2)(7v + 6) \\ &= -35v^5 - 51v^4 - 81v^3 - 54v^2 \end{aligned}$$

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

$$\begin{aligned} 4. & -4r^2(8r^4 + r^3) \\ &= -32r^6 - 4r^5 \end{aligned}$$

$$\begin{aligned} 5. & (5a^4 + 4a^3 - a^2)(-2a^4 - 3a^3 - 3a^2) \\ &= -10a^8 - 23a^7 - 25a^6 - 9a^5 + 3a^4 \end{aligned}$$

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

$$\begin{aligned} 7. & (-8y^2 - 9y - 3)(-8y^2 - 5y) \\ &= 64y^4 + 112y^3 + 69y^2 + 15y \end{aligned}$$

$$\begin{aligned} 8. & -4c^4(6c + 1) \\ &= -24c^5 - 4c^4 \end{aligned}$$

$$\begin{aligned} 9. & (-9n^5 + 6n^4 - 6n^3)(5n^3 + 7n^2 + 6n) \\ &= -45n^8 - 33n^7 - 42n^6 - 6n^5 - 36n^4 \end{aligned}$$

$$\begin{aligned} 10. & (-x^4 + 2x^3 + 9x^2)(4x^3 - 4x^2 + x) \\ &= -4x^7 + 12x^6 + 27x^5 - 34x^4 + 9x^3 \end{aligned}$$