

Multiplying a Monomial by a Trinomial (A)

Simplify each expression.

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

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

3. $s^4(-s^4 + 9s^3 + 2s^2)$

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

5. $-8s^3(2s^3 + 4s^2 - 2s)$

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

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

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

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

10. $-2n^3(5n^2 + 7n - 6)$

Multiplying a Monomial by a Trinomial (A) Answers

Simplify each expression.

$$\begin{aligned} 1. \quad & 6s^5(-3s^4 - 2s^3 + s^2) \\ & = -18s^9 - 12s^8 + 6s^7 \end{aligned}$$

$$\begin{aligned} 2. \quad & 5b^3(4b^5 - 8b^4 + 9b^3) \\ & = 20b^8 - 40b^7 + 45b^6 \end{aligned}$$

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

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

$$\begin{aligned} 5. \quad & -8s^3(2s^3 + 4s^2 - 2s) \\ & = -16s^6 - 32s^5 + 16s^4 \end{aligned}$$

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

$$\begin{aligned} 7. \quad & 3f^5(-3f^2 - 2f + 1) \\ & = -9f^7 - 6f^6 + 3f^5 \end{aligned}$$

$$\begin{aligned} 8. \quad & 8p^4(-9p^3 - 7p^2 + 3p) \\ & = -72p^7 - 56p^6 + 24p^5 \end{aligned}$$

$$\begin{aligned} 9. \quad & -6r^3(7r^3 - 5r^2 + 4r) \\ & = -42r^6 + 30r^5 - 24r^4 \end{aligned}$$

$$\begin{aligned} 10. \quad & -2n^3(5n^2 + 7n - 6) \\ & = -10n^5 - 14n^4 + 12n^3 \end{aligned}$$