

Multiplying a Monomial by a Trinomial (E)

Simplify each expression.

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

2. $5r^3(5r^3 - 3r^2 - 9r)$

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

4. $7z^5(5z^2 + 4z - 4)$

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

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

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

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

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

10. $-d^3(-9d^5 + 3d^4 + 9d^3)$

Multiplying a Monomial by a Trinomial (E) Answers

Simplify each expression.

$$\begin{aligned} 1. & 7t^3(-9t^4 + 6t^3 - 2t^2) \\ & = -63t^7 + 42t^6 - 14t^5 \end{aligned}$$

$$\begin{aligned} 2. & 5r^3(5r^3 - 3r^2 - 9r) \\ & = 25r^6 - 15r^5 - 45r^4 \end{aligned}$$

$$\begin{aligned} 3. & -8f(-3f^3 - 6f^2 + 5f) \\ & = 24f^4 + 48f^3 - 40f^2 \end{aligned}$$

$$\begin{aligned} 4. & 7z^5(5z^2 + 4z - 4) \\ & = 35z^7 + 28z^6 - 28z^5 \end{aligned}$$

$$\begin{aligned} 5. & -3z(-3z^4 + 9z^3 - 2z^2) \\ & = 9z^5 - 27z^4 + 6z^3 \end{aligned}$$

$$\begin{aligned} 6. & 2d(9d^5 + 4d^4 + 4d^3) \\ & = 18d^6 + 8d^5 + 8d^4 \end{aligned}$$

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

$$\begin{aligned} 8. & -5c^5(-3c^5 + 4c^4 - 8c^3) \\ & = 15c^{10} - 20c^9 + 40c^8 \end{aligned}$$

$$\begin{aligned} 9. & -9p^5(2p^5 - 5p^4 - 5p^3) \\ & = -18p^{10} + 45p^9 + 45p^8 \end{aligned}$$

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