

Multiplying Three Mon/Polynomials (A)

Simplify each expression.

1. $(3p^2 - 6p - 8)(-4p^5 + 4p^4 + 3p^3)(8p^2 - 6p + 1)$

2. $(7t^2 + 3t)(9t^2 + 5t)(2t^2 - 7t)$

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

4. $7w^4(-9w^2 - 8w)(w - 2)$

5. $(-9s + 1)(-6s^5 + 8s^4)(7s^4 - 8s^3)$

Multiplying Three Mon/Polynomials (A) Answers

Simplify each expression.

$$\begin{aligned} 1. & (3p^2 - 6p - 8)(-4p^5 + 4p^4 + 3p^3)(8p^2 - 6p + 1) \\ & = -96p^9 + 360p^8 - 92p^7 - 466p^6 + 125p^5 + 94p^4 - 24p^3 \end{aligned}$$

$$\begin{aligned} 2. & (7t^2 + 3t)(9t^2 + 5t)(2t^2 - 7t) \\ & = 126t^6 - 317t^5 - 404t^4 - 105t^3 \end{aligned}$$

$$\begin{aligned} 3. & (-9z^4 - 2z^3 - 3z^2)(-5z^5 - z^4 - 7z^3)(-5z + 9) \\ & = -225z^{10} + 310z^9 - 229z^8 + 635z^7 + 48z^6 + 189z^5 \end{aligned}$$

$$\begin{aligned} 4. & 7w^4(-9w^2 - 8w)(w - 2) \\ & = -63w^7 + 70w^6 + 112w^5 \end{aligned}$$

$$\begin{aligned} 5. & (-9s + 1)(-6s^5 + 8s^4)(7s^4 - 8s^3) \\ & = 378s^{10} - 978s^9 + 680s^8 - 64s^7 \end{aligned}$$