

Multiplying Three Mon/Polynomials (C)

Simplify each expression.

1. $(-7d^3 + 5d^2 - 7d)(-9d^4 + 8d^3)(8d^2 - 9d)$

2. $(5p^5 - 4p^4 + 5p^3)(7p^5 - 4p^4 + 3p^3)(-p^3 + 8p^2 + 7p)$

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

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

5. $(-6v^5 - 2v^4 + 3v^3)(-5v^5 - 7v^4 - 8v^3)(5v^3 + 9v^2 - 5v)$

Multiplying Three Mon/Polynomials (C) Answers

Simplify each expression.

$$\begin{aligned} 1. & (-7d^3 + 5d^2 - 7d)(-9d^4 + 8d^3)(8d^2 - 9d) \\ & = 504d^9 - 1375d^8 + 1733d^7 - 1375d^6 + 504d^5 \end{aligned}$$

$$\begin{aligned} 2. & (5p^5 - 4p^4 + 5p^3)(7p^5 - 4p^4 + 3p^3)(-p^3 + 8p^2 + 7p) \\ & = -35p^{13} + 328p^{12} - 205p^{11} + 224p^{10} + 191p^9 - 104p^8 + 105p^7 \end{aligned}$$

$$\begin{aligned} 3. & (2m^4 + m^3 + m^2)(7m^2 + 2m - 3)(-5m + 2) \\ & = -70m^7 - 27m^6 + 7m^5 + 11m^4 + 13m^3 - 6m^2 \end{aligned}$$

$$\begin{aligned} 4. & (-7c - 9)(-6c^3 + 3c^2 - c)(-9c - 9) \\ & = -378c^5 - 675c^4 - 117c^3 + 99c^2 - 81c \end{aligned}$$

$$\begin{aligned} 5. & (-6v^5 - 2v^4 + 3v^3)(-5v^5 - 7v^4 - 8v^3)(5v^3 + 9v^2 - 5v) \\ & = 150v^{13} + 530v^{12} + 553v^{11} + 138v^{10} - 400v^9 - 191v^8 + 120v^7 \end{aligned}$$