

Multiplying Three Binomials (A)

Simplify each expression.

1. $(-2t^4 + 8t^3)(-6t^2 + 9t)(-9t^4 - 8t^3)$

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

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

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

5. $(7c^2 + 6c)(6c^5 + 4c^4)(7c^3 + 2c^2)$

Multiplying Three Binomials (A) Answers

Simplify each expression.

$$\begin{aligned} 1. & (-2t^4 + 8t^3)(-6t^2 + 9t)(-9t^4 - 8t^3) \\ & = -108t^{10} + 498t^9 - 120t^8 - 576t^7 \end{aligned}$$

$$\begin{aligned} 2. & (-3z^3 - 9z^2)(5z^5 - 8z^4)(-9z^5 + 4z^4) \\ & = 135z^{13} + 129z^{12} - 732z^{11} + 288z^{10} \end{aligned}$$

$$\begin{aligned} 3. & (8d^3 - 9d^2)(-d^2 + 2d)(-4d - 7) \\ & = 32d^6 - 44d^5 - 103d^4 + 126d^3 \end{aligned}$$

$$\begin{aligned} 4. & (4y^4 - 6y^3)(y^2 - 4y)(2y + 7) \\ & = 8y^7 - 16y^6 - 106y^5 + 168y^4 \end{aligned}$$

$$\begin{aligned} 5. & (7c^2 + 6c)(6c^5 + 4c^4)(7c^3 + 2c^2) \\ & = 294c^{10} + 532c^9 + 296c^8 + 48c^7 \end{aligned}$$