

## Multiplication de Trois Trinômes (A)

Simplifiez chaque expression.

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

2.  $(2q^3 + 3q^2 + 8q)(-2q^5 - 3q^4 - 6q^3)(9q^2 + 9q + 1)$

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

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

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

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

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

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

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

10.  $(-3z^3 + z^2 + 2z)(2z^4 - 2z^3 - 4z^2)(6z^4 + 9z^3 - 8z^2)$

# Multiplication de Trois Trinômes (A) Réponses

Simplifiez chaque expression.

$$\begin{aligned} 1. & (-3r^4 + 4r^3 - 2r^2)(6r^4 + 3r^3 + 7r^2)(-2r^4 - 7r^3 + 9r^2) \\ & = 36r^{12} + 96r^{11} - 225r^{10} + 238r^9 - 315r^8 + 296r^7 - 126r^6 \end{aligned}$$

$$\begin{aligned} 2. & (2q^3 + 3q^2 + 8q)(-2q^5 - 3q^4 - 6q^3)(9q^2 + 9q + 1) \\ & = -36q^{10} - 144q^9 - 445q^8 - 723q^7 - 847q^6 - 474q^5 - 48q^4 \end{aligned}$$

$$\begin{aligned} 3. & (3m^3 + 2m^2 + m)(-9m^5 - 9m^4 + 6m^3)(5m^4 + 8m^3 - 4m^2) \\ & = -135m^{12} - 441m^{11} - 297m^{10} + 123m^9 + 90m^8 + 36m^7 - 24m^6 \end{aligned}$$

$$\begin{aligned} 4. & (n^5 - 7n^4 - 7n^3)(8n^5 + 7n^4 - 4n^3)(3n^4 + 2n^3 - 8n^2) \\ & = 24n^{14} - 131n^{13} - 489n^{12} + 111n^{11} + 914n^{10} + 224n^9 - 224n^8 \end{aligned}$$

$$\begin{aligned} 5. & (q^4 - 5q^3 - 8q^2)(5q^3 + 5q^2 - 2q)(-8q^5 + 4q^4 + 6q^3) \\ & = -40q^{12} + 180q^{11} + 486q^{10} - 148q^9 - 650q^8 - 116q^7 + 96q^6 \end{aligned}$$

$$\begin{aligned} 6. & (-7z^5 + 8z^4 - 7z^3)(-z^2 - 5z - 7)(-6z^5 - 9z^4 - 9z^3) \\ & = -42z^{12} - 225z^{11} - 402z^{10} - 261z^9 - 249z^8 - 252z^7 - 441z^6 \end{aligned}$$

$$\begin{aligned} 7. & (-b^2 - b + 1)(7b^4 - 8b^3 - 9b^2)(4b^2 + 3b - 4) \\ & = -28b^8 - 17b^7 + 127b^6 + 72b^5 - 129b^4 - 31b^3 + 36b^2 \end{aligned}$$

$$\begin{aligned} 8. & (-5f^3 - 8f^2 + 5f)(-3f^4 + f^3 - 8f^2)(-6f^4 - 2f^3 + 2f^2) \\ & = -90f^{11} - 144f^{10} - 110f^9 - 410f^8 + 136f^7 + 218f^6 - 80f^5 \end{aligned}$$

$$\begin{aligned} 9. & (7t^4 + 7t^3 + 5t^2)(-t^3 + t^2 + 5t)(7t^5 + 3t^4 + 8t^3) \\ & = -49t^{12} - 21t^{11} + 203t^{10} + 391t^9 + 591t^8 + 395t^7 + 200t^6 \end{aligned}$$

$$\begin{aligned} 10. & (-3z^3 + z^2 + 2z)(2z^4 - 2z^3 - 4z^2)(6z^4 + 9z^3 - 8z^2) \\ & = -36z^{11} - 6z^{10} + 204z^9 + 14z^8 - 232z^7 - 8z^6 + 64z^5 \end{aligned}$$