

## Multiplication de Trois Trinômes (E)

Simplifiez chaque expression.

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

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

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

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

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

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

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

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

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

10.  $(-c^2 - 9c - 5)(-7c^4 + 6c^3 - 5c^2)(-5c^4 - c^3 + 7c^2)$

## Multiplication de Trois Trinômes (E) Réponses

Simplifiez chaque expression.

$$\begin{aligned} 1. & (9r^2 + 9r + 8)(-2r^5 - 7r^4 + 9r^3)(-2r^4 - 4r^3 + 5r^2) \\ & = 36r^{11} + 234r^{10} + 230r^9 - 463r^8 - 234r^7 - 163r^6 + 360r^5 \end{aligned}$$

$$\begin{aligned} 2. & (8q^2 + 7q + 5)(-4q^5 - 2q^4 - 3q^3)(2q^4 - 5q^3 - 7q^2) \\ & = -64q^{11} + 72q^{10} + 328q^9 + 536q^8 + 531q^7 + 292q^6 + 105q^5 \end{aligned}$$

$$\begin{aligned} 3. & (-8f^4 - 4f^3 + 8f^2)(-4f^3 + 4f^2 + 8f)(6f^4 - f^3 + 8f^2) \\ & = 192f^{11} - 128f^{10} - 400f^9 - 16f^8 - 512f^7 - 64f^6 + 512f^5 \end{aligned}$$

$$\begin{aligned} 4. & (-9d^5 - 3d^4 - 6d^3)(-6d^3 - 2d^2 - 2d)(-9d^3 + 3d^2 - 2d) \\ & = -486d^{11} - 162d^{10} - 540d^9 - 54d^8 - 174d^7 - 24d^5 \end{aligned}$$

$$\begin{aligned} 5. & (7y^2 + 5y + 8)(-8y^3 - 4y^2 + 2y)(2y^3 + 5y^2 - 5y) \\ & = -112y^8 - 416y^7 - 200y^6 - 54y^5 + 272y^4 + 190y^3 - 80y^2 \end{aligned}$$

$$\begin{aligned} 6. & (4c^2 + 2c - 9)(7c^5 + 3c^4 + 4c^3)(-2c^5 + 8c^4 - 3c^3) \\ & = -56c^{12} + 172c^{11} + 206c^{10} - 368c^9 + 43c^8 - 231c^7 + 108c^6 \end{aligned}$$

$$\begin{aligned} 7. & (4c^4 - 3c^3 + 5c^2)(-3c^3 + c^2 + 8c)(7c^4 + c^3 + 7c^2) \\ & = -84c^{11} + 79c^{10} + 27c^9 - 28c^8 + 359c^7 - 93c^6 + 280c^5 \end{aligned}$$

$$\begin{aligned} 8. & (p^3 - 5p^2 + p)(-7p^4 - 3p^3 + p^2)(-7p^4 + 6p^3 + 7p^2) \\ & = 49p^{11} - 266p^{10} + 80p^9 + 334p^8 + 8p^7 - 50p^6 + 7p^5 \end{aligned}$$

$$\begin{aligned} 9. & (-2f^2 + 4f - 8)(f^4 - 7f^3 + 5f^2)(9f^3 - 2f^2 - 3f) \\ & = -18f^9 + 166f^8 - 444f^7 + 722f^6 - 374f^5 - 148f^4 + 120f^3 \end{aligned}$$

$$\begin{aligned} 10. & (-c^2 - 9c - 5)(-7c^4 + 6c^3 - 5c^2)(-5c^4 - c^3 + 7c^2) \\ & = -35c^{10} - 292c^9 + 62c^8 + 338c^7 - 238c^6 + 80c^5 + 175c^4 \end{aligned}$$