

## Multiplication de Deux Binômes par un Trinôme (E)

Simplifiez chaque expression.

$$1. (9q^5 + 2q^4)(-8q^3 - 6q^2)(2q^3 + 4q^2 + 7q)$$

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

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

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

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

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

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

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

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

$$10. (6p^2 + 2p)(p^3 + 7p^2)(-2p^4 + 7p^3 + 2p^2)$$

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## Réponses

Simplifiez chaque expression.

$$1. (9q^5 + 2q^4)(-8q^3 - 6q^2)(2q^3 + 4q^2 + 7q) \\ = -144q^{11} - 428q^{10} - 808q^9 - 538q^8 - 84q^7$$

$$2. (8q^4 + q^3)(-2q - 2)(-6q^2 + 3q - 5) \\ = 96q^7 + 60q^6 + 38q^5 + 84q^4 + 10q^3$$

$$3. (3s + 1)(-3s^3 + 7s^2)(-s^5 + 9s^4 - 4s^3) \\ = 9s^9 - 99s^8 + 191s^7 - 9s^6 - 28s^5$$

$$4. (-6d^5 + 8d^4)(-3d^5 + 5d^4)(-8d^4 + 4d^3 - 3d^2) \\ = -144d^{14} + 504d^{13} - 590d^{12} + 322d^{11} - 120d^{10}$$

$$5. (4h^4 - 7h^3)(2h^5 - 3h^4)(9h^3 + 5h^2 + 3h) \\ = 72h^{12} - 194h^{11} + 83h^{10} + 27h^9 + 63h^8$$

$$6. (4k - 8)(-6k^2 + 5k)(-3k^3 + 5k^2 - 2k) \\ = 72k^6 - 324k^5 + 508k^4 - 336k^3 + 80k^2$$

$$7. (-6g^2 - 3g)(2g^5 - 4g^4)(8g^2 + 6g - 2) \\ = -96g^9 + 72g^8 + 228g^7 + 36g^6 - 24g^5$$

$$8. (-4w^5 - 3w^4)(7w + 3)(-6w^5 - 8w^4 + 3w^3) \\ = 168w^{11} + 422w^{10} + 234w^9 - 27w^8 - 27w^7$$

$$9. (-2r^2 + 7r)(7r^3 + 3r^2)(-3r^3 + 4r^2 - r) \\ = 42r^8 - 185r^7 + 123r^6 + 41r^5 - 21r^4$$

$$10. (6p^2 + 2p)(p^3 + 7p^2)(-2p^4 + 7p^3 + 2p^2) \\ = -12p^9 - 46p^8 + 292p^7 + 186p^6 + 28p^5$$