Multiplying Three Trinomials (A)

Simplify each expression.

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

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

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

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

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

Multiplying Three Trinomials (A) Answers

Simplify each expression.

1. $(2h^5 - 5h^4 + 4h^3)(-4h^5 - 8h^4 - 4h^3)(-6h^4 + 2h^3 + 4h^2)$
   $= 48h^{14} - 40h^{13} - 120h^{12} + 120h^{11} + 136h^{10} - 80h^9 - 64h^8$

2. $(-6v^2 + 7v + 6)(-3v^2 + 9v - 2)(3v^4 + 5v^3 - v^2)$
   $= 54v^8 - 135v^7 - 222v^6 + 480v^5 + 107v^4 - 100v^3 + 12v^2$

3. $(5n^3 - 7n^2 + 7n)(-n^2 + 9n - 8)(-6n^5 + 2n^4 + 6n^3)$
   $= 30n^{10} - 322n^9 + 734n^8 - 622n^7 - 86n^6 + 602n^5 - 336n^4$

4. $(4f^4 - 5f^3 - 8f^2)(-7f^2 + 4f - 4)(2f^4 - 7f^3 - 3f^2)$
   $= -56f^{10} + 298f^9 - 233f^8 - 317f^7 + 88f^6 - 188f^5 - 96f^4$

5. $(-4w^2 + 6w + 7)(7w^5 + 6w^4 + 9w^3)(3w^3 - 5w^2 + 7w)$
   $= -84w^{10} + 194w^9 - 139w^8 + 169w^7 + 52w^6 + 357w^5 + 441w^4$