Multiplying a Monomial by Two Binomials (G)

Simplify each expression.

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

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

3. $7h^4(8h - 9)(9h - 7)$

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

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

Multiplying a Monomial by Two Binomials (G) Answers

Simplify each expression.

1. $-r^2(-r^5 + 2r^4)(-8r^4 + 4r^3)$
$= -8r^{11} + 20r^{10} - 8r^9$

2. $8p^4(3p^3 + 6p^2)(-7p^5 - 2p^4)$
$= -168p^{12} - 384p^{11} - 96p^{10}$

3. $7h^4(8h - 9)(9h - 7)$
$= 504h^6 - 959h^5 + 441h^4$

4. $f^4(-9f^4 - 4f^3)(f^4 + 5f^3)$
$= -9f^{12} - 49f^{11} - 20f^{10}$

5. $8t^4(-2t^2 + 7t)(-9t^4 - 3t^3)$
$= 144t^{10} - 456t^9 - 168t^8$