Multiplying a Binomial by Two Trinomials (J)

Simplify each expression.

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

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

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

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

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

Multiplying a Binomial by Two Trinomials (J) Answers

Simplify each expression.

1. $(-3b-5)(b^2+7b-2)(2b^4+2b^3-4b^2)$
$= -6b^7-58b^6-98b^5+66b^4+136b^3-40b^2$

2. $(-5g^2+g)(2g^4-7g^3-8g^2)(-6g^4-6g^3+7g^2)$
$= 60g^{10}-162g^9-490g^8+109g^7+279g^6-56g^5$

3. $(5k+4)(9k^3+9k^2-2k)(-8k^5-7k^4-k^3)$
$= -360k^9-963k^8-820k^7-199k^6+30k^5+8k^4$

4. $(-5d^5-4d^4)(d^5-9d^4+4d^3)(-6d^3+d^2-5d)$
$= 30d^{13}-251d^{12}-30d^{11}-93d^{10}-96d^9+80d^8$

5. $(-5x^5+3x^4)(5x^5+9x^4-2x^3)(-7x^2+4x+2)$
$= 175x^{12}+110x^{11}-429x^{10}+130x^9+50x^8-12x^7$