EXTRA PRACTICE — Exercises

Unit V – Second Degree Relations and Higher - Polynomials
Part C – Solving Equations and Inequalities by Factoring
Lesson 7 – Special Products - Sum of Difference of Cubes

Find the indicated product for each of the following.

1. $(2y-3)(4y^2+6y+9)$

2. $(x+10)(x^2-10x+100)$

3. $2(y+3)(y^2-3y+9)$

4. $(3y-4)(9y^2+12y+16)$

5. $3(n-5)(n^2+5n+25)$

6. $(2x+5)(4x^2-10x+25)$

Rewrite each of the following polynomials as a product of two polynomial factors.

7. x^3-216y^9

8. $.001c^3-.008d^3$

9. $x^3y^3+m^3$

10. $8x^3-1$

11. y^6+8

12. $\frac{1}{8}a^3-\frac{1}{27}b^3$

EXTRA PRACTICE — Answer Key

Unit V – Second Degree Relations and Higher - Polynomials
Part C – Solving Equations and Inequalities by Factoring
Lesson 7 – Special Products - Sum of Difference of Cubes

Find the indicated product for each of the following.

1. $8y^3 - 27$

2. $x^3 + 1000$

3. $2y^3 + 54$

4. $27y^3 - 64$

5. $3n^3 - 375$

6. $8x^3 + 125$

Rewrite each of the following polynomials as a product of two polynomial factors.

7. $\left(x - 6y^3\right)\left(x^2 + 6xy^3 + 36y^6\right)$

8. $(.1c - .2d)\left(.01c^2 + .02cd + .04d^2\right)$

9. $(xy + m)\left(x^2y^2 - mxy + m^2\right)$

10. $(2x - 1)\left(4x^2 + 2x + 1\right)$

11. $\left(y^2 + 2\right)\left(y^4 + 2y^2 + 4\right)$

12. $\left(\frac{1}{2}a - \frac{1}{3}b\right)\left(\frac{1}{4}a^2 + \frac{1}{6}ab + \frac{1}{9}b^2\right)$