

EXTRA PRACTICE — Exercises

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Unit V – Second Degree Relations and Higher - Polynomials Part C – Solving Equations and Inequalities by Factoring Lesson 6 – Special Products - Four-Term Polynomial

Find the indicated product for each of the following.

1. $(x - y)(a + b)$

2. $(m + n)(q + 1)$

3. $(x - y)(3 - a)$

4. $(h - 2)(x - 1)$

5. $(h^2 - 25)(k - 4)$

6. $(x^2 + y)(2 - 3m)$

7. $(2x + y)(p - 3t)$

8. $(2m - 1)(x^2 - 9)$

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

Rewrite each of the following four-term polynomials as a product of binomial or trinomial factors. Be sure to factor completely.

10. $x^3 + 2x^2 + 3x + 6$

11. $x^3 + x + x^2 + 1$

12. $cx + cy + bx + by$

13. $c^3 - c - c^2 + 1$

14. $3y^3 - 6y^2 - 3y + 6$

15. $x^2 - 6x + 9 - 4y^2$

16. $m^2 + 2np - p^2 - n^2$

17. $5a^3 + 2a^2 - 15a - 6$

18. $1 - m^2 - 25n^2 + 10mn$

EXTRA PRACTICE — Answer Key

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Unit V – Second Degree Relations and Higher - Polynomials Part C – Solving Equations and Inequalities by Factoring **Lesson 6 – Special Products - Four-Term Polynomial**

Find the indicated product for each of the following.

1. $ax - ay + bx - by$

2. $mq + nq + m + n$

3. $3x - 3y - ax + ay$

4. $hx - 2x - h + 2$

5. $h^2k - 25k - 4h^2 + 100$

6. $2x^2 + 2y - 3mx^2 - 3my$

7. $2px + py - 6xt - 3yt$

8. $2mx^2 - x^2 - 18m + 9$

9. $3x^2y + 9x^2 - 7y - 21$

Rewrite each of the following four-term polynomials as a product of binomial or trinomial factors. Be sure to factor completely.

10. $(x + 2)(x^2 + 3)$

11. $(x + 1)(x^2 + 1)$

12. $(x + y)(c + b)$

13. $(c - 1)(c + 1)(c - 1)$

14. $3 \cdot (y + 1)(y - 1)(y - 2)$

15. $(x - 3 + 2y)(x - 3 - 2y)$

16. $(m + p - n)(m - p + n)$

17. $(5a + 2)(a^2 - 3)$

18. $(1 + m - 5n)(1 - m + 5n)$