

EXTRA PRACTICE — Exercises

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Unit V – Second Degree Relations and Higher - Polynomials Part C – Solving Equations and Inequalities by Factoring **Lesson 5 – Special Products - General Trinomial**

Find the indicated product for each of the following.

1. $(2p - 5)(p + 1)$

2. $(3x - 4)(x - 2)$

3. $(3c + 7)(c - 1)$

4. $(x + 5y)(x - 3y)$

5. $(3 + 2x)(2 - 5x)$

6. $(y - 8)(y + 4)$

7. $(5x + 1)(2x + 3)$

8. $(2x - 3y)(5x - 4y)$

9. $(2c + d)(c - 2d)$

Solve each of the following polynomial relations by rewriting the polynomial as a product of first degree factors related to zero.

10. $y^2 - 6 - 5y \geq 0$

11. $m^2 - 2m = 24$

12. $x^2 + 12 - 7x = 0$

13. $5m^2 - 25m - 30 = 0$

14. $x^2 - 70 > 3x$

15. $a^2 - 10 - 3a < 0$

16. $3a^2 + 7a + 4 = 0$

17. $8b^2 + 2b \leq 21$

18. $10x^2 + 17x + 3 = 0$

EXTRA PRACTICE — Answer Key

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Find the indicated product for each of the following.

1. $2p^2 - 3p - 5$

2. $3x^2 - 10x + 8$

3. $3c^2 + 4c - 7$

4. $x^2 + 2xy - 15y^2$

5. $6 - 11x - 10x^2$

6. $y^2 - 4y - 32$

7. $10x^2 + 17x + 3$

8. $10x^2 - 23xy + 12y^2$

9. $2c^2 - 3cd - 2d^2$

Solve each of the following polynomial relations by rewriting the polynomial as a product of first degree factors related to zero.

10. $S = \{y \mid y \leq -1 \text{ or } y \geq 6\}$

11. $S = \{6, -4\}$

12. $S = \{3, 4\}$

13. $S = \{6, -1\}$

14. $S = \{x \mid x < -7 \text{ or } x > 10\}$

15. $S = \{a \mid -2 < a < 5\}$

16. $S = \left\{ \frac{-4}{3}, -1 \right\}$

17. $S = \left\{ b \mid \frac{-7}{4} \leq b \leq \frac{3}{2} \right\}$

18. $S = \left\{ \frac{-1}{5}, \frac{-3}{2} \right\}$