

EXTRA PRACTICE — Exercises

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Unit VIII – Quadratic Equations

Part A – Solving Quadratic Equations of the form $ax^2+bx+c=0$

Lesson 1 – Suppose $a=0$, $b=0$, or $c=0$

For each of the following relations, identify a, b, and c relative to the standard form, and then solve using appropriate strategies.

1. $5x^2 - 40x = 0$

2. $2y + 5y = 14$

3. $q^2 = q$

4. $7y^2 - 21 = 0$

5. $9z^2 = 2z$

6. $x^2 - 121 = 0$

7. $3y - 4 = 0$

8. $\frac{5}{3}x = 12$

9. $y^2 + 10 = 46$

10. $5a - 3 = 7 - 5a$

11. $\frac{-7}{6}x = 21$

12. $4x - 15 = 9x$

13. $a^2 + 2 = 11$

14. $4x^2 = 196$

15. $y^2 = 49$

16. $n^2 + 2n = 3$

EXTRA PRACTICE — Answer Key

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Unit VIII – Quadratic Equations

Part A – Solving Quadratic Equations of the form $ax^2+bx+c=0$

Lesson 1 – Suppose $a=0$, $b=0$, or $c=0$

For each of the following relations, identify a, b, and c relative to the standard form, and then solve using appropriate strategies.

1. $a = 5, b = -40, c = 0$ $S = \{0, 8\}$

2. $a = 0, b = 7, c = -14$ $S = \{2\}$

3. $a = 1, b = -1, c = 0$ $S = \{0, 1\}$

4. $a = 7, b = 0, c = -21$ $S = \{\sqrt{3}, -\sqrt{3}\}$

5. $a = 9, b = -2, c = 0$ $S = \left\{0, \frac{2}{9}\right\}$

6. $a = 1, b = 0, c = -121$ $S = \{11, -11\}$

7. $a = 0, b = 3, c = -4$ $S = \left\{\frac{4}{3}\right\}$

8. $a = 0, b = \frac{5}{3}, c = -12$ $S = \left\{\frac{36}{5}\right\}$

9. $a = 1, b = 0, c = -36$ $S = \{-6, 6\}$

10. $a = 0, b = 10, c = -10$ $S = \{1\}$

11. $a = 0, b = \frac{-7}{6}, c = -21$ $S = \{-18\}$

12. $a = 0, b = -5, c = -15$ $S = \{-5\}$

13. $a = 1, b = 0, c = -9$ $S = \{3, -3\}$

14. $a = 4, b = 0, c = -196$ $S = \{7, -7\}$

15. $a = 1, b = 0, c = -49$ $S = \{7, -7\}$

16. $a = 1, b = 2, c = -3$ $S = \{1, -3\}$