

3.1**Answer Key**

1. {6, -2}

2. {10}

3. {2, 4}

4. {2, 7}

5. {0, 4}

6. {5}

7. $\{0, \frac{9}{10}\}$

8. {-9, 11}

9. {-6}

10. {3, 4}

11. $\{\frac{5}{6}, -\frac{5}{6}\}$

12. {9, -5}

13. $x^2 - 9x + 14 = 0$

14. $x^2 - 3x = 0$

15. $x^2 - 3x - 40 = 0$

16. $3x^2 + 8x - 3 = 0$

17. $15x^2 + 22x + 8 = 0$

18. 7 ft. by 9 ft.

3.2**Answer Key**

1. Discriminant: 0
Type: 1 rational
Solutions: {8}

2. Discriminant: 9
Type: 2 rational
Solutions: {0, 3}

3. Discriminant: 0
Type: 1 rational
Solutions: $\frac{4}{3}$

4. Discriminant: 169
Type: 2 rational
Solutions: {-5, 8}

5. Discriminant: 105
Type: 2 irrational
Solutions: $\frac{-9 \pm \sqrt{105}}{6}$

6. Discriminant: 49
Type: 2 rational
Solutions: $\{0, -\frac{7}{2}\}$

7. Discriminant: -76
Type: 2 complex
Solutions: $\frac{1 \pm i\sqrt{19}}{5}$

8. Discriminant: 289
Type: 2 rational
Solutions: $\{\frac{3}{4}, -\frac{2}{3}\}$

9. Discriminant: -20
Type: 2 complex
Solutions: $\frac{-3 \pm i\sqrt{5}}{7}$

10. Discriminant: 196
Type: 2 rational
Solutions: $\{\frac{1}{2}, -\frac{2}{3}\}$

11. Discriminant: 28
Type: 2 irrational
Solutions: $\frac{1 \pm \sqrt{7}}{6}$

12. Discriminant: -15
Type: 2 complex
Solutions: $\frac{-3 \pm i\sqrt{15}}{2}$