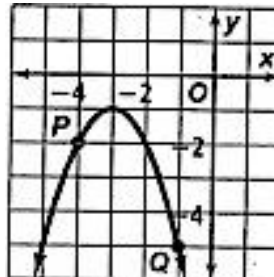
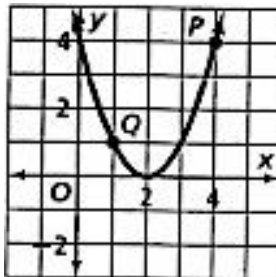
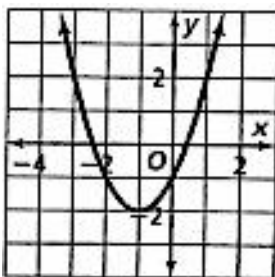
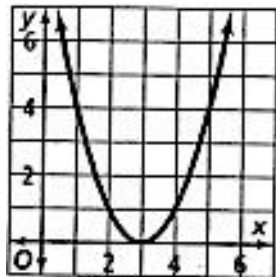
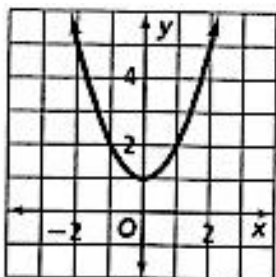


Homework 5.4 Solving Quadratics Part 1

Solve for the zeros of the quadratic equations in the graphs below.



Solve for the roots of the quadratic equations in the tables below.

Input	Output
-3	5
-2	0
0	-4
1	-3
2	0

Independent	Dependent
-4	0
-3	0
-2	0
-1	2
0	6

x	$f(x)$
3	-1
0	-3
4	0
0	2
-1	0

Answer the following questions about solving quadratics.

2. What are the synonyms (other ways) to state to “solve for x” in a quadratic equation?

3. What are the solving methods to solve for quadratic equations? Fill in the methods in the diagram below.

2 Terms (Binomials)	3 Terms (Trinomials)
1. _____	1. _____
2. _____	2. _____

4. In order to solve for x by using those methods answered in question 3, you must

Homework 5.4 Solving Quadratics Part 1 (Page 2)

Find the solutions of the quadratics.

1. $x^2 + 5x + 6 = 0$

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

3. $a^2 - 9a + 18 = 0$

4. $t^2 + 2t - 19 = 5$

5. $x^2 + 15x + 30 = -6$

6. $d^2 + 10d = -6$

7. $2x^2 + 6x + 4 = 0$

8. $3a^2 - 12a = 15$

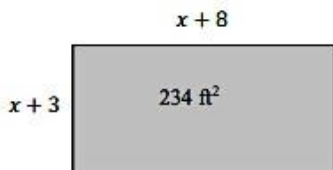
9. $c^2 - 6c + 9 = 0$

10. $5x^2 - 14x + 8$

11. $x^2 - 49 = 0$

12. $7k^2 = 7k$

13. Consider a rectangle with a width expressed as $(x + 3)$ feet and a length expressed as $(x + 8)$ feet. Find the exact value of the width and length given the rectangle's area is 234 ft^2 .



5.4 Answers

Page 1 **1** *Answers in order from left to right* No Solution; (3, 0); (-2.5, 0), (0.5, 0); (2, 0); No Solution; (-2, 0), (2, 0); (-3, 0), (-2, 0); (4, 0), (-1, 0) **2** roots, zeros, solutions **3** *2 Terms*: 1. GCF Factoring, 2. Differences of Squares; *3 Terms*: 1. GCF Factoring, 2. Factoring Trinomials **4** set equation equal to 0

Page 2 **1** $x = -2, x = 3$ **2** $x = -3, x = 4$ **3** $a = 3, a = 6$ **4** $t = -6, t = 4$ **5** $x = -3, x = -12$ **6** $d = -8, d = -2$
7 $x = -2, x = -1$ **8** $a = 5, a = -1$ **9** $c = 3$ **10** $x = \frac{4}{5}, x = 2$ **11** $x = -7, x = 7$ **12** $k = 0, k = 1$ **13** Width is 13 feet.
Length is 18 feet.