

Name

Key

Date

Pd

3.4 Using the Quadratic Formula DAY TWO CYU

Use when you get it right all by yourself

S Use when you did it all by yourself, but made a silly mistake

H Use when you could do it alone with a little help from teacher or peer

G Use when you completed the problem in a group

X Use when a question was attempted but wrong (get help)

N Use when a question was not even attempted

CONCEPTS	BASIC	INTERMEDIATE	ADVANCED
Finding a, b, c	1	2 - 6	
Converting to standard form	2 - 6		
Plugging a, b, c into quadratic formula	1	2 - 6	
Simplifying quadratic formula	1	2 - 6	
Checking solutions on your graphing calculator	1 - 6		
Finding the value of the discriminant			
Stating the number & type of solutions			

Solve each equation using the quadratic formula. Use a graphing calculator to check your solution(s).

1. $x^2 + 6x + 15 = 0$

$$x = -3 \pm i\sqrt{6}$$

4. $x^2 + 121 = -22x$

$$x = -11$$

2. $2x^2 + 4x = 30$

$$x = 3, -5$$

5. $-7w + 6 = -4w^2$

$$w = \frac{7 \pm i\sqrt{47}}{8}$$

3. $-4x^2 + 3x = -5$

$$x = \frac{3 \pm \sqrt{89}}{8}$$

6. $-z^2 = -12z + 6$

$$z = 6 \pm \sqrt{30}$$

Find the discriminant of the quadratic equation and describe the number and type of solutions of the equation.

7. $4n^2 - 4n - 24 = 0$

400
two real roots
 $n = 3, -2$

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

52
two real
 $x = 1 \pm \sqrt{13}$

** answers will vary w/ explanation*

Solve the quadratic equation using the Quadratic Formula. Then solve the equation using another method. Which method do you prefer? Explain in complete sentences. (Graphing, Factoring, Square Root Method, Completing the Square)

9. $3x^2 - 21 = 3$ (Completing the Square)
 $x = \pm 2\sqrt{2}$

12. $x^2 = 1 - x$ (Quadratic Formula)
 $x = \frac{-1 \pm \sqrt{5}}{2}$

10. $x^2 = 3x + 15$ (Quadratic Formula)
 $x = \frac{3 \pm \sqrt{69}}{2}$

13. $9x^2 + 36x + 72 = 0$ (Completing the Square)
 $x = -2 \pm 2i$

11. $2x^2 - 54 = 12x$ (factor)
 $x = 9, -3$

14. $x^2 - 7x + 12 = 0$ (graphing)
 $x = 3, 4$

CYU Reflection: How far can you go: basic, intermediate, or advanced?

Rate your mastery level!

How confident are you with the skills this CYU covered? Circle the

