Name _____ Date _____ Pd _____

Algebra 1 Quadratic Review CYU DAY ONE

Solve by Factoring

1.) $x^2 - 64 = 0$

2.) $x^2 - 6x - 16 = 0$

3.) $x^2 + 3x = 40$

4.) $2x^2 + 3x + 1 = 0$

5.) $x^2 - 100 = 0$

6.) $x^2 + 6x = 0$

Solve by Square Roots:

7.) $x^2 = 64$

8.) $4x^2 = 81$

9.) $x^2 + 7 = -300$

10.) $(x - 5)^2 = 36$

Solve by using the quadratic formula.

11. $x^2 + 3x + 2 = 0$

12. $4x^2 - 8x = 1$

13. $x^2 + 8x = 0$

Solve each equation any way you want. Show your work.

14. $x^2 + 11x + 18 = 0$

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

16. $7x^2 - 9x + 1 = 0$

17. $(x + 2)^2 = 36$

18. $x^2 - 10x + 25 = 0$

19. $x^2 + 3x + 7 = 0$

20. $x^2 = 36$

21. $x^2 - 6x + 2 = 0$

22. $x^2 - 5x + 4 = 0$

REASONING:

20.) Which method can't you use to solve this problem? **$x^2 - 47 = 0$**

Circle one: Factoring Completing the Square Quadratic Formula

Explain why:

21.) Which method can you use to solve all quadratic equations?

Circle one: Factoring Completing the Square Quadratic Formula

Explain why:

22.) What are the **two mistakes** in setting up the quadratic formula?

Solve: $2x^2 - x - 6 = 0$ $x = \frac{-1 \pm \sqrt{(-1)^2 - 4(2)(6)}}{2(2)}$

23.) Factor the following:

a. $x^2 - 12x + 32$

b. $6x^2 + 13x + 6$

c. $x^2 - 25$

d. $12x^2 - x - 6$

e. $6x^2 + 27x - 15$

25.) Clean up the following:

a. $\frac{-8 \pm 4\sqrt{2}}{2}$ b. $\frac{5 \pm 10\sqrt{3}}{10}$

26.) Simplify the following:

a. $\sqrt{12} + \sqrt{48}$ b. $\sqrt{80}$ c $4\sqrt{20}$ d. $(\sqrt{8})(\sqrt{9})$

e. $3 + \sqrt{8} - \sqrt{2} + 3\sqrt{5} - 4 - 3\sqrt{5}$ f. $(3\sqrt{2} + 5)(6\sqrt{2} - 1)$

j. $(\sqrt{5})^2 =$ k. $(2\sqrt{3})^2 =$ l. $(\sqrt{-9})^2 =$ m. $(\sqrt{-40})^2 =$

28.) Match the following quadratics with their roots/solutions/zeros/x-intercepts:

_____ $x^2 + 5x + 4$ a. x = 4, 1

_____ $x^2 + 5x - 4$ b. x = -3, -7

_____ $x^2 - 5x + 4$ c. $x = \frac{-5 \pm \sqrt{41}}{2}$

_____ $x^2 - 5x - 4$ d. $x = \frac{5 \pm \sqrt{41}}{2}$

_____ $(x + 5)^2 = 4$ e. x = -4, -1