

Algebra Review Solving Quadratics

Name

PROBLEM SOLVING

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

III. Solve by using the **quadratic formula**: **The quadratic formula is:** **x =**

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.) Explain why $x^2 = -81$ DOES NOT have a solution.

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

Circle one: Factoring Square Roots Quadratic Formula

Explain why:

22.) Which method can't you use to solve this problem? $x^2 + 7x = 0$

Circle one: Factoring Square Roots Quadratic Formula

Explain why:

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

Circle one: Factoring Square Roots Quadratic Formula

Explain why:

24.) What are the **two mistakes** in setting up the quadratic formula:

Solve: $2x^2 - x - 6 = 0$

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