

Algebra 2/Trig 1
Solving Radical Equations

Name: _____

Block: _____ Date: _____

Solve the following:

1. $x^{2/5} = 25$

2. $x^{4/3} = -16$

3. $x^{3/2} = -8$

4. $x^{2/3} = 9$

5. $x^{3/5} = 4$

6. $2\sqrt{x} = 8$

7. $4\sqrt{x} - 5 = 3$

8. $x^{3/4} + 10 = 30$

9. $2x^{4/3} = 24$

****You must _____ answers back in to avoid false/extraneous solutions****

Example:

10. $x - 4 = \sqrt{2x}$

11. $\sqrt{4x - 7} + 5 = 2$

12. $\sqrt[4]{2x} - 13 = -9$

13. $\sqrt{6x - 5} + 10 = 3$

14. $\sqrt[3]{x + 40} = -5$

15. $x^{1/3} - \frac{2}{5} = 0$

16. $-\frac{1}{2}x^{1/5} = 10$

17. $(x - 4)^{3/2} = -6$

18. $3(x + 1)^{4/3} = 48$

19. $x - 12 = \sqrt{6x}$

20. $\sqrt{x^2 + 5} = x + 3$

21. $\sqrt{8x+1} = x+2$

22. $\sqrt{x-3} = \sqrt{2x+5}$

23. $\sqrt[3]{20-6x} = \sqrt[3]{4-2x}$

24. $\sqrt{3x+2} - 2\sqrt{x} = 0$

25. $\sqrt[3]{x+4} = \sqrt[3]{2x-5}$

26. $-\sqrt{2x-1} = \sqrt{x+4}$

27. $\sqrt[4]{2x} + \sqrt[4]{x+3} = 0$

28. $\sqrt[3]{2x+10} - 2\sqrt[3]{x} = 0$

Homework: page 441-442 #23-53 1st column (12 problems)