

Solve the equation. Check your solution.

1. $\sqrt{x} + 3 = 12$

2. $x^{1/2} - 4 = 1$

3. $3\sqrt{x+2} = 6$

4. $(2x - 3)^{1/2} + 2 = 2$

5. $5\sqrt{3x} = 15$

6. $3\sqrt{4 - 3x} = 21$

7. $7 - \sqrt{x - 4} = -6$

8. $\sqrt{3x+4} + \frac{3}{2} = 3$

9. $2(x - 1)^{1/2} - 3 = 7$

Solve the equation. Check your solution.

10. $\sqrt[3]{x} + 1 = -2$

11. $4\sqrt[3]{x} + 2 = 0$

12. $\sqrt[3]{2x+7} = 5$

13. $(x + 4)^{1/3} - 2 = -6$

14. $8\sqrt[3]{x} + 3 = 11$

15. $3x^{1/3} - 2 = -4$

16. $-2\sqrt[3]{2x+5} + 7 = 15$

17. $\frac{1}{2}(5x + 1)^{1/3} + \frac{5}{2} = 4$

18. $6\sqrt[3]{x-3} + 2 = \frac{1}{2}$

Solve the equation. Check for extraneous solutions.

19. $x^{5/3} = 243$

20. $x^{3/2} + 3 = 11$

21. $2x^{5/3} = -64$

22. $(x - 2)^{3/4} = 8$

23. $(2x + 12)^{2/3} - 3 = 13$

24. $(3x + 21)^{4/3} + 9 = 90$

Solve the equation. Check for extraneous solutions.

25. $\sqrt{x-3} = \sqrt{2x-7}$

26. $\sqrt{x+3} = \sqrt{4x-8}$

27. $\sqrt[3]{4x-9} = \sqrt[3]{2x-4}$

28. $\sqrt[3]{3x+3} = \sqrt[3]{2x-7}$

29. $\sqrt{x+1} = \sqrt{3x-3}$

30. $\sqrt[3]{3x+9} = \sqrt[3]{x+6}$

31. $x+2 = \sqrt{2x+7}$

32. $\sqrt{2x+3} = 1 + \sqrt{x+1}$