

Solving Radical Equations

Solving equations radical equations:

- 1) Isolate radical on one side
- 2) Square or cube both sides
- 3) Solve

Example: Solve each radical equation.

1) $2 + \sqrt{3x-2} = 6$

2) $\sqrt{5x+1} - 6 = 0$

3) $5\sqrt{x} + 2 = 12$

4) $\sqrt[3]{3x-4} = 2$

5) $5\sqrt[3]{4x+3} = 15$

WARNING: If a variable is outside the radical, you have to check for extraneous solutions!

6) $\sqrt{x-3} + 5 = x$

7) $\sqrt{x+1} - x = 1$

8) $\sqrt{2x+1} = \sqrt{5-2x}$

9) $\sqrt{2x+14} = x+3$

10) $\sqrt{-9x+28} = -x+4$

Radical Equations HW

1) $-3 + \sqrt{m+59} = m$

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

3. $\sqrt{3x-1} = \sqrt{2x+4}$

4. $\sqrt{x+6} - \sqrt{2x-4} = 0$

5. $\sqrt{x+56} = x$

6. $\sqrt{x+18} = x-2$

7. $3\sqrt{2x} - 3 = 9$

8. $\sqrt{2x-1} - 3 = 0$

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

10. $-n + \sqrt{6n+19} = 2$

11. $x = \sqrt{42-x}$

12. $\sqrt{4n} = n$