

Solve each radical equation. **CHECK FOR EXTRANEIOUS SOLUTIONS**

1. $3\sqrt{x} + 3 = 15$

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

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

4. $\sqrt{3x + 4} = 4$

5. $\sqrt{2x + 3} - 7 = 0$

6. $\sqrt{6 - 3x} - 2 = 0$

15. $\sqrt{11x + 3} - 2x = 0$

16) $\sqrt{5x + 4} - 3x = 0$

$$17. \sqrt{3x + 13} - 5 = x$$

$$18. \sqrt{x + 7} + 5 = x$$

$$19) \sqrt{x + 3} - 1 = x$$

$$20) \sqrt{5 - x} = x + 1$$

Simplify the following expressions using the properties of exponents.

$$26) \frac{2x^4 y^{-4} z^{-3}}{3x^2 y^{-3} z^4}$$

$$28) \frac{2h^3 j^{-3} k^4}{3jk}$$

$$30) \frac{3x^3 y^{-1} z^{-1}}{x^{-4} y^0 z^0}$$

Convert between rational exponent and radical forms, or vice versa.

$$19) (\sqrt[4]{m})^3$$

$$23) (\sqrt[3]{3a})^4$$

$$4) 7^{\frac{4}{3}}$$

$$14) (5x)^{-\frac{1}{2}}$$