

1.4 Rational Exponent Equations WS

Solve each equation.

1. $x^{\frac{1}{3}} = 2$

2. $x^{\frac{1}{2}} = 5$

3. $x^{\frac{2}{5}} = 9$

4. $x^{\frac{4}{3}} = 81$

5. $3x^{\frac{2}{3}} - 16 = 59$

6. $4x^{\frac{4}{5}} - 27 = 37$

7. $4x^{\frac{3}{4}} - 31 = 77$

8. $4x^{\frac{4}{5}} + 54 = 378$

Solve each equation. Remember to check for extraneous solutions.

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

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

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

$$12. \sqrt{16 - x} = \sqrt{x - 10}$$

$$13. x - 4 = \sqrt{3x - 2}$$

$$14. -1 + \sqrt{-1 - 5x} = \sqrt{3x + 10}$$