

Name _____
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Date _____
Algebra II

Constant Exponential Equations

Solve the following equations for x:

1. $x^{\frac{1}{2}} = 7$

2. $x^{\frac{2}{3}} = 4$

3. $x^{-2} = \frac{25}{121}$

4. $a^{\frac{1}{4}} = 2$

5. $3x^{\frac{2}{5}} - 11 = 289$

6. $x^{\frac{1}{5}} - 6 = -8$

7. $x^{\frac{4}{3}} - 11 = 5$

8. $(2x)^3 + 4 = 31$

9. $y^{-3} = \frac{125}{8}$

10. $4x^{\frac{2}{3}} - 5 = 95$

11. Given the equal terms $\sqrt[3]{x^5}$ and $y^{\frac{5}{6}}$, determine and state y , in terms of x .