Name _____ Date _____
Mr. Schlansky Algebra II

Constant Exponential Equations

Solve the following equations for x. Round values to the nearest tenth if necessary.

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

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

3. $2x^3 + 1 = 55$

4. $3x^{\frac{4}{3}} - 5 = 43$

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

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

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

8. $4x^{\frac{3}{4}} - 2 = 254$

9. $3x^{\frac{2}{5}} + 1 = 76$

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

11. $-2x^{\frac{5}{4}} - 7 = -71$

12. $2x^{\frac{3}{2}} - 5 = 76$

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

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