

11.1 Practice Worksheet

Name: _____ Hr: _____

Simplify each expression. Make sure to show your work (what you changed to get that answer).

1. $\frac{10^{\frac{1}{3}}}{10^{\frac{1}{6}}}$

2. $\left(\frac{2}{3}\right)^{-3}$

3. $\sqrt{6} \cdot \sqrt{12}$

4. $\sqrt{7} \cdot \sqrt{14}$

5. $(x^2y^4)^5$

6. $\frac{x^3y^2}{(y^2)^2}$

7. $(243y^5)^{\frac{1}{5}}$

8. $\sqrt[4]{256y^6}$

9. Express using rational exponents

$$\sqrt[4]{81x^8y^3}$$

10. Express using a radical.

$$17x^{\frac{1}{4}}y^{\frac{1}{3}}$$

Solve each equation.

11. $7766 = x^{\frac{5}{2}} - 10$

12. $3\sqrt{x^3} = 192$