

**Math 2**

Name: \_\_\_\_\_

**Exponent Rules and Simplifying Radicals Practice**

Simplify. Your answer should contain only positive exponents.

1.  $m^4 n^4 \cdot 2m^2 n^{-2}$

2.  $2u^{-4} v^3 \cdot 4uv$

3.  $\frac{4x^4 y^2}{4x^3 y^{-4} \cdot 3x^4 y^0}$

4.  $\frac{2yx^{-4} \cdot x^0}{3x^{-4} y^{-1}}$

5.  $(4x^2)(-3x^3)$

6.  $(3ab^2)^3$

7.  $\left(\frac{2x^3}{x}\right)^5$

8.  $\frac{2x^4 y^2}{x^2 y^2}$

9.  $\frac{5x^3}{10x^7}$

10.  $\frac{3a^2b^3c^{-2}}{(a^{-1}b^2c)^3}$

Write each expression in radical form.

11.  $m^{\frac{1}{2}}$

12.  $(2x)^{\frac{8}{5}}$

13.  $(6b)^{\frac{3}{2}}$

14.  $12x^{\frac{2}{3}}$

Write each expression using rational exponents.

15.  $(\sqrt[3]{v})^2$

16.  $\sqrt[5]{r^4}$

17.  $\sqrt[10]{x^8}$

18.  $\sqrt[3]{x^2y}$