

## Exponent Properties (w/fractions)

Date \_\_\_\_\_ Period \_\_\_\_\_

**Simplify.**

1)  $m^2 \cdot 2m^{\frac{1}{2}}$

2)  $2x^{\frac{1}{2}} \cdot 2x$

3)  $p^{\frac{1}{2}} \cdot p$

4)  $n^{\frac{1}{2}} n^{\frac{1}{2}}$

5)  $\left(n^{\frac{1}{2}}\right)^{\frac{1}{2}}$

6)  $\left(a^{\frac{3}{2}}\right)^{\frac{3}{2}}$

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

8)  $\left(r^{\frac{1}{2}}\right)^{\frac{3}{2}}$

9)  $\frac{v^2}{2v^{\frac{3}{2}}}$

10)  $\frac{2x}{x^{\frac{1}{2}}}$

$$11) \frac{2x^{\frac{3}{2}}}{2x}$$

$$12) \frac{n^{\frac{3}{2}}}{n^2}$$

**Solve each equation. DO NOT USE A CALCULATOR.**

$$13) 7 = \sqrt{n}$$

$$14) 3 = x^{\frac{1}{3}}$$

$$15) 27 = x^{\frac{3}{4}}$$

$$16) x^2 = 27$$

$$17) \sqrt{b} = 5$$

$$18) \sqrt{p} = 9$$

$$19) x^{\frac{3}{2}} = 729$$

$$20) \sqrt[3]{x} = 5$$

$$21) 3 = p^{\frac{1}{2}}$$

$$22) 243 = m^{\frac{5}{4}}$$