

2.2 B Exponent Properties

Date _____ Period _____

Simplify.

1) $a^2 \cdot 3b^{\frac{4}{3}}$

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

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

4) $(m^2)^2$

Simplify. Your answer should contain only positive exponents.

5) $\frac{x^{\frac{1}{4}}y^{\frac{3}{2}}}{xy^{\frac{1}{2}}}$

6) $\frac{4xy^{\frac{5}{4}}}{x^{\frac{4}{3}}}$

Simplify.

7) $3y^{\frac{1}{2}} \cdot 2y^{\frac{1}{2}}$

8) $4y \cdot 2y$

9) $\left(u^{\frac{5}{3}}v^{\frac{2}{3}}\right)^2$

10) $(x^2y^2)^2$

Simplify. Your answer should contain only positive exponents.

$$11) \frac{4u^{\frac{3}{2}}v^{\frac{1}{2}}}{v^{\frac{1}{2}}}$$

$$12) \frac{3ba^{\frac{3}{2}}}{ab^4}$$

Write each expression in exponential form.

$$13) \sqrt[3]{4b}$$

Write each expression in radical form.

$$14) (2b)^{\frac{5}{6}}$$

Factor each completely. (GCF Only)

$$15) b^2 + 6b$$

$$16) 4n^2 + 28n$$

Factor each completely. (X-factoring)

$$17) r^2 - 11r + 30$$

$$18) r^2 - 12r + 35$$

$$19) x^2 + 13x + 30$$

$$20) p^2 + 5p + 6$$

Factor each completely. (Garbage Factoring)

$$21) 6a^2 + 5a - 6$$

$$22) 9x^2 - 9x - 10$$