Math-2 Name_____ ID: 1

Math-2 HW #2-6 (rational exponents)

Date_____ Period____

Simplify.

1) $\dfrac{\sqrt{3}}{3\sqrt{12}}$

2) $\dfrac{2\sqrt{6}}{\sqrt{25}}$

Write each expression in exponential form.

3) $\left(\sqrt[5]{3k}\right)^2$

4) $\left(\sqrt[3]{4k}\right)^2$

5) $3\sqrt[4]{v^2}$

6) $4\sqrt[5]{2n^2}$

Write each expression in radical form.

7) $7 \cdot (2m)^{\frac{1}{2}}$

8) $3 \cdot (10x^3)^{\frac{5}{6}}$

9) $(5k)^{\frac{5}{4}}$

10) $n^{0.5}$

Simplify. Your answer should contain only positive exponents with no fractional exponents in the denominator.

11) $3a^{-\frac{1}{2}} \cdot 4a^{-1}b^2$

12) $4x^{-\frac{3}{2}}y^{-\frac{4}{3}} \cdot x^{\frac{1}{2}}y^{\frac{3}{2}}$

Simplify.

13) $\left(a^2b^{\frac{7}{4}}\right)^{\frac{4}{3}}$

14) $\left(u^{\frac{1}{2}}v^{\frac{4}{3}}\right)^{\frac{3}{2}}$

Simplify. Your answer should contain only positive exponents with no fractional exponents in the denominator.

15) $\dfrac{2b^{\frac{3}{2}}}{3a^{\frac{1}{2}}}$

16) $\dfrac{2u^{\frac{3}{4}}v^{-\frac{3}{4}}}{3v^{-2}}$

17) $\dfrac{2b^{\frac{2}{3}}}{4b}$

18) $\dfrac{4y^2}{4x^{\frac{1}{2}}y^{\frac{7}{4}}}$