SM3-A HW #7-4 (review)

Date_____ Period____

Write each expression in exponential form.

1) $\left(\sqrt[4]{5n}\right)^5$

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

Write each expression in radical form.

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

4) $3 \cdot \left(2x\right)^{\frac{5}{2}}$

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

5) $2u^{-\frac{1}{2}}v^{\frac{1}{2}} \cdot uv^{\frac{1}{2}}$

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

Simplify.

7) $\left(y^{\frac{4}{3}}\right)^{\frac{4}{3}}$

8) $\left(x^{\frac{1}{2}}y^{\frac{7}{4}}\right)^{\frac{5}{3}}$

9) $3\sqrt{3} - 2\sqrt{3}$

10) $-\sqrt{2} - 3\sqrt{8}$

11) $\sqrt{3}\left(3 - 4\sqrt{3}\right)$

12) $\sqrt{5}\left(\sqrt{10} + 2\right)$

13) $\sqrt[4]{32x^5y^4}$

14) $\sqrt{288xy}$

15) $\frac{4\sqrt{5}}{\sqrt{80}}$

16) $\frac{5\sqrt{15}}{\sqrt{48}}$

Simplify. Your answer should contain only positive exponents.

17) $x^{-2}y^{-4} \cdot 2x^{-4}y^2$

18) $\left(3y^2\right)^{-1}$

19) $\left(x^{-2}y^3\right)^{-1}$

20) $\frac{4x^3y^{-3}}{xy^2}$