Math-2 Name_____ ID: 1

SM2 HW #10-2 (Review Units 2 and 3)

Date_____ Period____

Simplify.

1) $-3\sqrt{24} - \sqrt{2} - \sqrt{18}$

2) $4\sqrt{15}\left(5\sqrt{10} + \sqrt{3}\right)$

3) $\sqrt{3}\left(\sqrt{5} + 3\right)$

4) $\sqrt{27xy}$

5) $\dfrac{4\sqrt{5}}{2\sqrt{2}}$

6) $\dfrac{\sqrt{20}}{\sqrt{12}}$

7) $\dfrac{5}{\sqrt{3} + 4}$

8) $\dfrac{3}{4 + \sqrt{5}}$

Write each expression in exponential form.

9) $5 \cdot \left(\sqrt[3]{6n^2}\right)^5$

Write each expression in radical form.

10) $4 \cdot (2v)^{\frac{3}{2}}$

Simplify.

11) $\sqrt[4]{243x^8y^3}$

12) $\sqrt[3]{250m^8n}$

13) $\left(3x^3 + 4x^2\right) - \left(4x^2 - 2x^3\right)$

14) $6k^3\left(2k - 8\right)$

Simplify. Your answer should contain only positive exponents.

15) $2xy^{-2} \cdot 4x$

16) $4x^{-2} \cdot 2x^{-2}y^{4}$

17) $\left(4m^{3}n^{-1}\right)^{-2}$

18) $\left(4x^{-4}y^{2}\right)^{-3}$

19) $\dfrac{x^{0}y^{4}}{\left(x^{-4}\right)^{3}}$

20) $\dfrac{x^{-1}y^{2}}{\left(x^{3}\right)^{0}}$

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

21) $3a^{-3}b^{-\frac{1}{4}} \cdot 4ab^{2}$

22) $\left(xy^{-\frac{7}{4}}\right)^{-2}$

23) $\dfrac{x^{2}y^{\frac{1}{2}}}{3x^{\frac{5}{4}}y^{-\frac{3}{2}}}$