Math-2 Name_____ ID: 1



# SM2 HW #2-9 (Unit 2 Test Preview HW)

Date_____ Period____

**Simplify. Your answer should contain only positive exponents. There may not be any fractional exponents in the denominator.**

1) $2nm^3 \cdot 3m^4n^2$

2) $2x^3y^{-2} \cdot \left(x^4y^2\right)^0$

3) $8n(4n + 7)$

4) $\dfrac{2yx^4}{4xy^{-4}}$

**Simplify.**

5) $-5\sqrt{3} \cdot \sqrt{6}$

6) $5\sqrt{10}\left(\sqrt{5} + 3\right)$

7) $\sqrt{12xy}$

8) $\dfrac{\sqrt{9}}{4\sqrt{15}}$

**Write each expression in exponential form.**

9) $\left(\sqrt[4]{x}\right)^7$

10) $\sqrt{5k}$

**Write each expression in radical form.**

11) $3m^{\frac{7}{6}}$

12) $3 \cdot \left(x^3\right)^{\frac{1}{6}}$

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

13) $4x^{\frac{1}{2}}y^2 \cdot 2y^{\frac{2}{3}}$

**Simplify.**

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

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

15) $\dfrac{4yx^{-\frac{1}{2}}}{3y^{\frac{1}{2}}}$

**Factor the common factor out of each expression.**

16) $24x^4 - 15x$

17) $20k^3 - 18k^2 + 8k$

**Find each product.**

18) $(x - 1)(x + 4)$

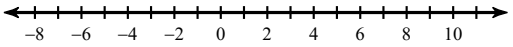
19) $(5n + 5)(8n + 2)$

**Solve each equation.**

20) $|5 + n| = 15$

**Write the solution to the inequality in: (a) Simplified inequality notation, (b) Interval notation then (c) graph the solution.**

21) $|m - 1| > 5$



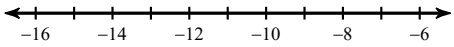

**Solve each equation.**

22) $3 + 9|x - 1| = 75$

23) $8 = 5v + 8 - 5v$

**Write the solution to the inequality in: (a) Simplified inequality notation, (b) Interval notation then (c) graph the solution.**

24) $-1 > \frac{x}{2} + 4$




25) $-38 > -2 - 4v$