Algebra 2 Name_____ ID: 1

Assignment

Date_____ Period____

Simplify. Your answer should contain only positive exponents.

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

2) $\dfrac{-yx^2}{-2y^4 \cdot \left(x^2y^4\right)^4}$

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

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

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

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

7) $\dfrac{\left(2x^{-4}\right)^0 \cdot \left(-x^{-1}y^4\right)^{-2}}{2x^4y^2}$

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

9) $\left(\dfrac{x^4y^{-4}}{-yx^{-3} \cdot -2x^{-2}y^{-1}}\right)^{-3}$

10) $\dfrac{\left(-2x^2y^0\right)^{-4}}{-2x^2y^{-1} \cdot -2xy^{-1}}$

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

11) $\dfrac{\left(y^{\frac{1}{2}}z^{-\frac{2}{3}}\right)^{\frac{5}{3}}}{x^{\frac{3}{2}}z^{-2} \cdot x^{\frac{4}{3}}y^{-\frac{3}{2}}z^{-1} \cdot z^{\frac{3}{2}}}$

12) $\dfrac{\left(h^{-\frac{2}{3}}j^{\frac{1}{4}}k^{\frac{4}{3}}\right)^2}{h^{\frac{1}{2}}j^2k^2 \cdot h^{\frac{1}{3}}j^{\frac{1}{2}}k^2}$

13) $\dfrac{\left(x^{\frac{5}{4}}y^{\frac{3}{2}}z^{-\frac{5}{4}}\right)^2 \cdot x^{-3}}{x^{\frac{1}{3}}}$

14) $\dfrac{\left(mnp^{\frac{3}{4}}\right)^{-\frac{5}{4}}}{\left(m^{\frac{2}{3}}n^2p^{-\frac{3}{2}}\right)^{\frac{3}{4}} \cdot m^{-\frac{3}{4}}p^{\frac{7}{4}}}$

Simplify. Your answer should contain only positive exponents.

15) $\left(\dfrac{-a^{-2}c^7 \cdot a^4b^8c^7}{-a^4c^2}\right)^5$

16) $\dfrac{m^7q^{-6}}{-m^7 \cdot \left(m^{-6}p^2q^7\right)^{-4}}$

17) $\dfrac{n^2 p^6}{\left(-m^7 n^5 p^5\right)^6 \cdot p^4}$

18) $\dfrac{\left(x^{-7} y^6 z^{-2}\right)^{-4} \cdot -x^5 y^3}{x^{-4} y^{-3} z^5}$

19) $\left(\dfrac{p^3 q^2 r^{-6} \cdot r^5}{p^4 q^8}\right)^6$

20) $\dfrac{m^{-5} p^{-7} \cdot m^{-1} n^7 p^{-4}}{\left(-m n^{-7} p^{-8}\right)^8}$

21) $\dfrac{\left(p^5 q^3 r^{-7}\right)^4 \cdot r^4}{-p q^{-6} r^2}$

22) $-\dfrac{x^6 y^4 z^8 \cdot -x^8 y^{-6} z^{-3}}{\left(-y x^3 z^{-8}\right)^2}$