Algebra 0507
Chapter 8
Intro to WS # 4

Name_____

Dividing Monomials

Quotient of Powers: For all integers *m* and *n* and any nonzero number *a*, $\frac{a^m}{a^n} = a^{m-n}$
Power of Quotient: For all integers *m* and *n* and any real nonzero numbers *a* and *b*, $b \neq 0$ $\left(\frac{a}{b}\right)^m = \frac{a^m}{b^m}$

In English:_____

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Simplify. Assume that the denominator does not equal zero.

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

5. $\dfrac{32x^6y^4}{-8xy^3}$	6. $\dfrac{3x^7y^2}{9x^4y^2}$
7. $\dfrac{-24y^5z^3}{-8y^4z}$	8. $\dfrac{-9x^6y^3}{-3x^6y}$
9. $\dfrac{-14x^4}{7x^2}$	10. $\dfrac{-4x^8y^{10}z^3}{8x^6y^{10}z}$
11. $\dfrac{-48x^3y^{12}}{-12xy^7}$	12. $\left(\dfrac{2a^2b}{a}\right)^3$
13. $\left(\dfrac{4p^4q^4}{3p^2q^2}\right)^3$	14. $\left(\dfrac{-3r^6s^3}{2r^5s}\right)^3$