

Dividing Monomials Homework

Name Key
Date _____ Period _____

Simplify #1-4 by expanding.

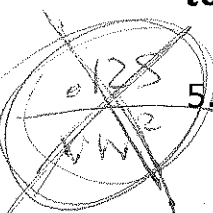
1. $\frac{x^5}{x^3} = \frac{x \cdot \cancel{x} \cdot \cancel{x} \cdot \cancel{x} \cdot x}{\cancel{x} \cdot \cancel{x} \cdot \cancel{x}} = x^2$

2. $\frac{a^6}{a^2} = a^4$
 $\frac{a \cdot a \cdot a \cdot a \cdot a \cdot a}{a \cdot a}$

3. $\frac{10y^5}{-5y} = -2y^4$
 $\frac{10 \cdot y \cdot y \cdot y \cdot y \cdot y}{-5 \cdot y}$

4. $\frac{m^3n^4}{m^4n} = \frac{n^3}{m}$
 $\frac{m \cdot m \cdot m \cdot n \cdot n \cdot n \cdot n}{m \cdot m \cdot m \cdot m \cdot n}$

Write an equivalent expression for each of the following. You do not have to expand. NO negative exponents in final answer



5. $\frac{13v^2w^2}{24v^3w^4} = \frac{1}{8vw^2}$

6. $\frac{24k}{12k} = 2$

7. $\frac{15m^4n^3}{315m^4n^2} = \frac{1}{3}n$

8. $\frac{p^3}{p^{-2}} = p^5$
 $p^{3-(-2)} = p^5$

9. $\frac{-42c^5}{16c^{-2}} = -\frac{7}{4}c^7$
 c^{5+2}

10. $\left(\frac{y^0}{y^4}\right)^0 = 1$

11. The area of a rectangle is $12x^3y^4$. If one side has a length of $4xy^2$, what is the length of the other side?

f $b = \frac{A}{h}$
s $b = \frac{12x^3y^4}{4xy^2}$
s $b = 3x^2y^2$

$A = bh$
 $A = lw$

Algebra 1, Unit 1

Review:

12. $\left(\frac{3}{5}\right)^{-3} = \frac{125}{27}$

13. $-8.2^2 = -67.24$

14. $[8 - 2(3 + 1)^0] - 6 = 0$

15. If $x = -4, y = 2$, then $\frac{x^2y}{x^3} = -\frac{1}{2}$

$\frac{(-4)^2(2)}{(-4)^3}$ or $\frac{4}{x} \cdot \frac{2}{-4}$

16. $(-3x^2yz^4)(5x^2y^3z^{-4}) = -15x^4y^4$

17. $(5x^2y^4)^3 = 125x^6y^{12}$

$(5x^2y^4)(5x^2y^4)(5x^2y^4)$
 $5 \cdot 5 \cdot 5 = 125$
 $x^2 \cdot x^2 \cdot x^2 = x^6$
 $y^4 \cdot y^4 \cdot y^4 = y^{12}$