Warm Up 8/23/17

Distributive Property Quiz

Homework Questions?



https://youtu.be/VQsQj1Q_CMQ

Exponents.ppt

8/23/17

Essential Question

 How do I simplify and evaluate numeric expressions involving integer exponents?

8/23/17

Rules of Exponents

N.RN.1 I CAN... rewrite expressions involving rational exponents using the properties of exponents.

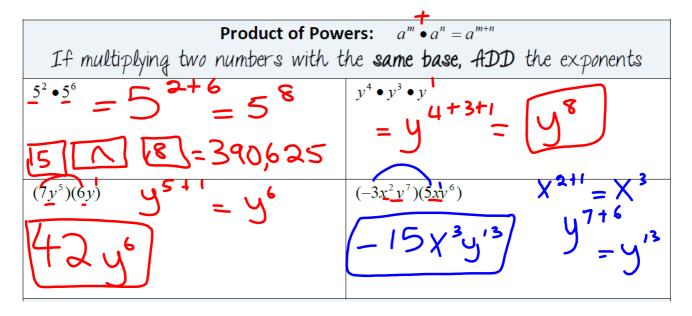
vocabularys

Monomial A number, a variable, or a product of a number and one or more variables

Examples: 34xy, 7a3b



rules of exponents:



Quotient of Powers:
$$\frac{a^m}{a^n} = a^{m-n}$$

If dividing two numbers with the same base, SUBTRACT the exponents

 $\frac{y^6}{y} = y \cdot y \cdot y \cdot y \cdot y \cdot y$
 $\frac{6^{13}}{6^2} = 0$
 $\frac{10a^7b^9}{15a^5b^9}$
 $\frac{10 \cdot 5}{15 \cdot 5} \cdot \frac{2}{3}$
 $\frac{20^2 \cdot 1}{3} \cdot \frac{10^{-5} \cdot 2}{3} \cdot \frac{2}{3}$
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Zero Exponent: $a^0=1$ Any nonzero number with an exponent of zero is equivalent to 1

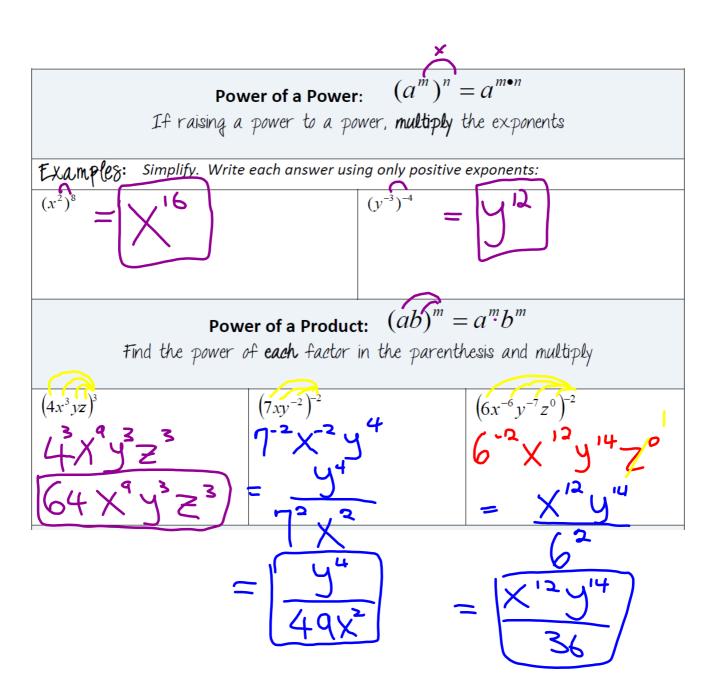
WHY?? Let's explore
$$\frac{8^2}{8^2}$$

$$(-3x+7)^{0} = (-3x)^{2} + 7^{0} = 8x^{0} + 5 = 8$$

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Negative Exponent $a^{-n} = \frac{1}{a^n}$

For any nonzero number "a" raised to a negative exponent, place the power in the denominator to rewrite the power with a positive exponent



Power of a Quotient:
$$\left(\frac{a}{b}\right)^m = \frac{a^m}{b^m}$$

For any numbers "a" and "b" where $b \neq 0$, if the quotient of a and b is raised to a power, raise both the numerator and the denominator to the given power

$$\left(\frac{3}{5}\right)^2 = \frac{3}{5} = \frac{9}{25}$$

$$\left(\frac{2a^5}{b^7}\right)^2 = \frac{2^2 C_1^{10}}{b^{14}} = \frac{4a^{1b}}{b^{14}}$$

$$\left(\frac{3a^{-4}}{b^7}\right)^3 = \frac{3}{5} = \frac{3}{5$$

Distributive Property Quiz Review

Combine like terms to simplify each expression.

1)
$$-4x + 5x = 1$$

2)
$$1 + 5v + v + 6$$

$$11) 9n + 3n$$

$$12n$$

12)
$$12x + 11 - 4$$
 $12x + 7$

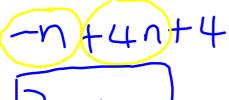
Use Distributive Property. 13) 3(-7-8n)

13)
$$3(-7-8n)$$

14)
$$-8(1+5m)$$

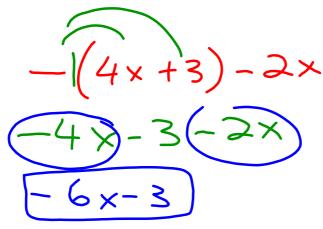
First, use Distributive Property, then Combine Llike Terms to simplify each expression. 25) -n + 4(n + 1) 26) -3(1 - 3x) + 2x

25)
$$-n + 4(n+1)$$



26)
$$-3(1-3x)+2x$$

$$-3+11\times$$



https://youtu.be/1p5kpP7C_CE

Exponents.ppt