Bell Work 1/22/2015

Simplify the following:

$$\frac{1}{x^4} \cdot x^{10} = \frac{x^{10}}{x^4}$$

$$\frac{4}{z^{-10}} = 4z^{10}$$

$$x^6$$

$$x^{-4} = \frac{1}{x^4}$$

Combining Like Terms	Product of Powers
$x + x + x =$	$x^r x^s =$

Power of Powers	Power of Products
$(x^r)^s =$	$(ab)^r =$

Quotient Powers	Powers of a Quotient
$\frac{x^r}{x^s} =$	$\left(\frac{a}{b}\right)^r =$

Back Cover

Definitions

Today we are going to be using our properties of exponents on practice problems.

We will be using the white boards.

Please make sure that you have a white board, dry-erase marker and something to erase with.

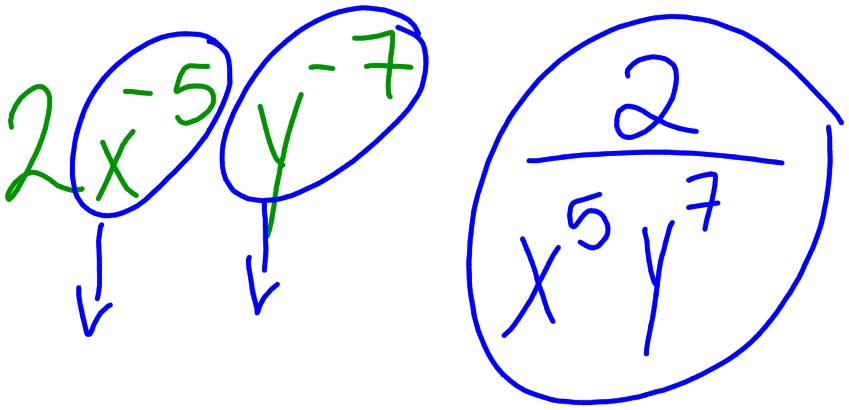
$(a^r)^s$

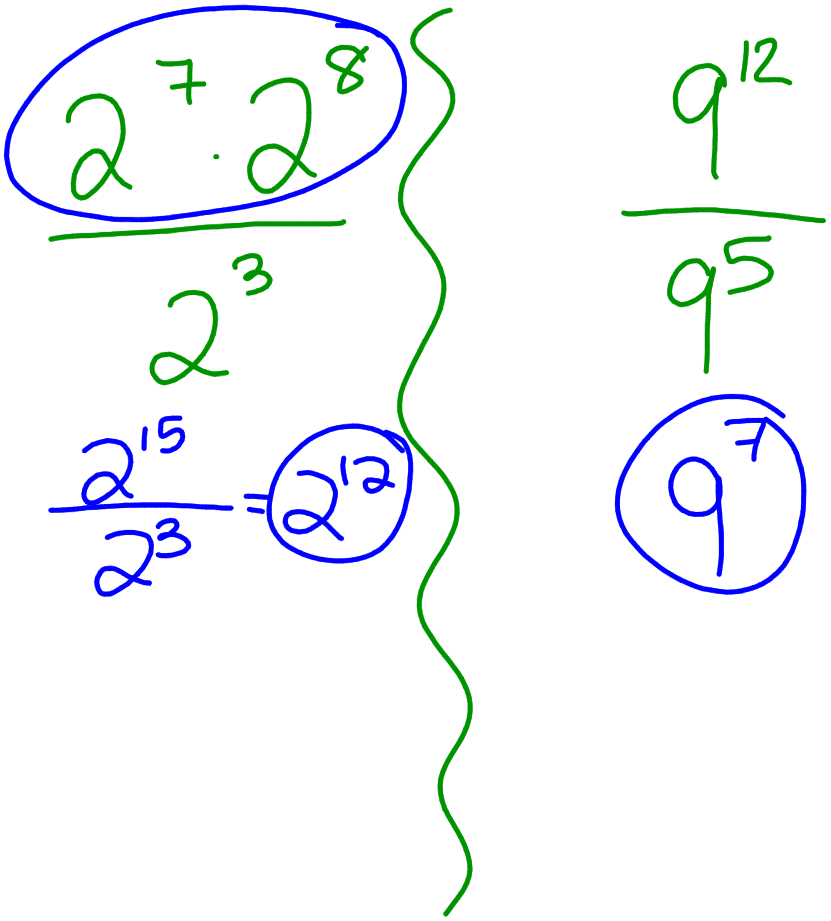
$(4x^4y^{-3})^{-2}$

$4^{-2}\ x^{4\cdot-2}\ y^{-3\cdot-2}$

$\boxed{4^{-2}\ x^{-8}}\ y^6$

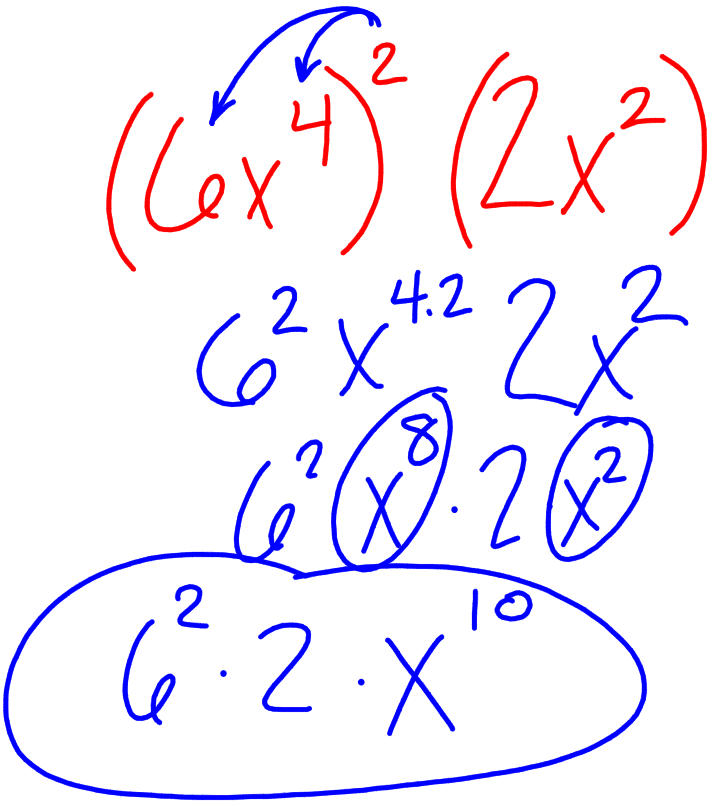
$= \dfrac{y^6}{4^2\ x^8}$


2 x^-5 y^-7
2
x^5 y^7


$\frac{2^7 \cdot 2^8}{2^3}$
$\frac{2^{15}}{2^3} = 2^{12}$
$\frac{9^{12}}{9^5}$
9^7

$$\left(\frac{b^{2}}{2a^{3}}\right)^{-2} = \frac{b^{2\cdot -2}}{2^{-2}a^{3\cdot -2}}$$

$$\frac{b^{-4}}{2^{-2}a^{-6}} = \frac{2^{2}a^{6}}{b^{4}}$$


$(6x^4)^2(2x^2)$
$6^2x^{4\cdot2}2x^2$
$6^2x^8\cdot2x^2$
$6^2\cdot2\cdot x^{10}$

$$(4x^4y^{-3})^{-2}$$

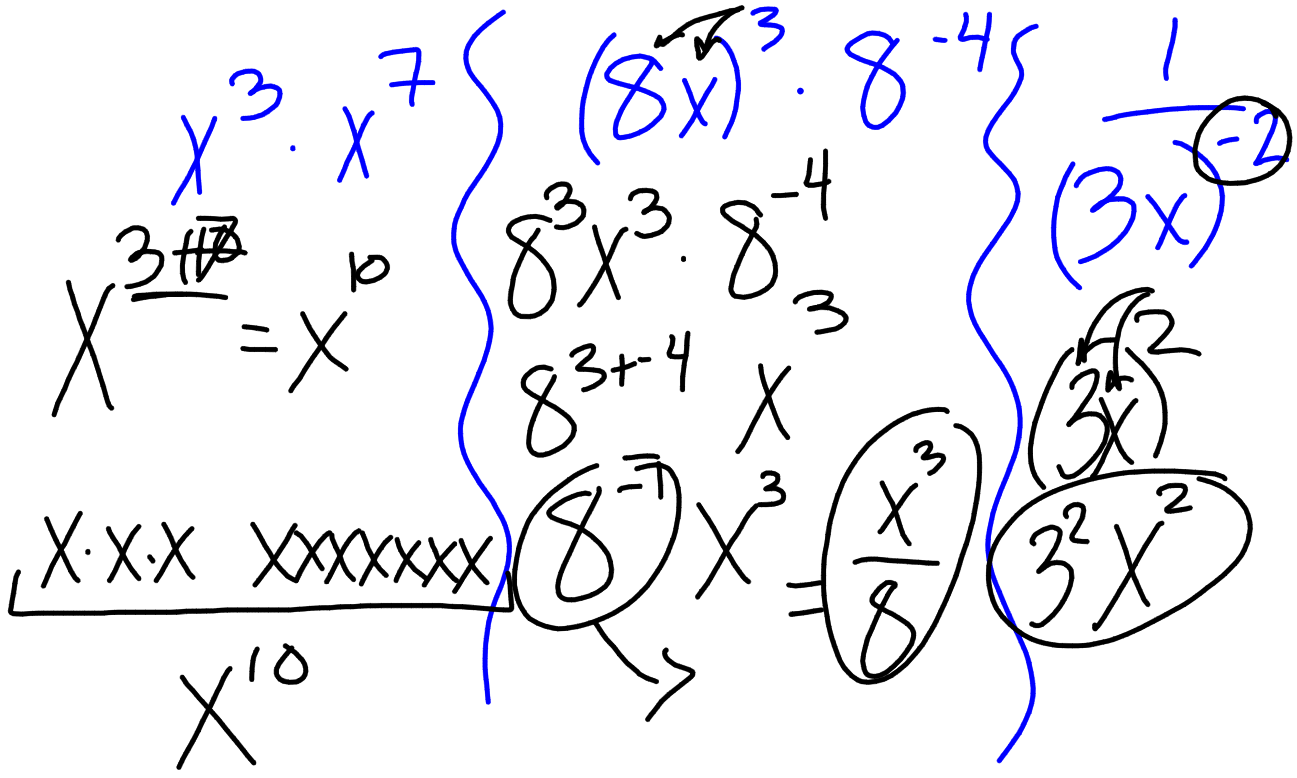
$$\frac{a^{-3}\,b^{7}\,c^{-5}}{a^{2}\,b^{-3}\,c^{-8}}$$

$$\frac{a^{-3}}{a^{2}}\cdot\frac{b^{7}}{b^{-3}}\cdot\frac{c^{-5}}{c^{-8}}$$

$$a^{-3-2}\;b^{7+3}\;c^{-5+8}$$

$$a^{-5}\;b^{10}\;c^{3}$$

$$=\frac{b^{10}\,c^{3}}{a^{5}}$$


$x^3 \cdot x^7$
$x^{3+7} = x^{10}$
$x \cdot x \cdot x \; xxxxxxx$
x^{10}
$(8x)^3 \cdot 8^{-4}$
$8^3 x^3 \cdot 8^{-4}$
$8^{3+-4} \; x^3$
$8^{-1} \; x^3 = \frac{x^3}{8}$
$\frac{1}{(3x)^{-2}}$
$3^2 x^2$
$3^2 x^2$