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| $\begin{aligned} & 10 \\ & 0 \\ & 0 \\ & 0 \end{aligned}$ | 1/18/2016 | Objective: | No School |  |
|  |  | Assignment: | MLK Day |  |
| $\begin{aligned} & 10 \\ & 10 \\ & \text { is } \\ & \hline \end{aligned}$ | 1/19/2016 | Objective: | Division Properties of Exponents |  |
|  |  | Assignment: | Practice \#1-10 |  |
| 788$\vdots$88 | 1/20/2016 | Objective: | Rational Exponents |  |
|  |  | Assignment: | Practice \#1-8 |  |
|  | 1/21/2016 | Objective: | Simplifying Monomials |  |
|  |  | Assignment: | Practice \#1-10 |  |
| \% | 1/22/2016 | Objective: | Quiz |  |
|  |  | Assignment: | HW 4.3 Due! |  |

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Be lw $\mathbf{k}$
Week of $\qquad$ - $\qquad$

Monday

Name: $\qquad$
Period: $\qquad$

Friday

## Algebra I - Unit 6: Division Properties of Exponents

## Practice - Division Properties of Exponents

Name $\qquad$
$\qquad$ Period $\qquad$

Simplify the expressions below:

1. $\frac{-3 x^{7}}{6 x^{3}}$
2. $\frac{15 x^{-3}}{x}$
3. $\frac{8 x^{10} y^{7}}{2 x^{6} y^{6}}$
4. $\left(\frac{x^{-5}}{x^{-2}}\right)^{5}$
5. $\frac{x^{9} y}{\left(x^{2} y^{9}\right)^{2}}$
6. $\left(\frac{3 b^{2} c}{6 a b^{3}}\right)^{-2}$
7. A rectangular parking lot has an area of $10 a^{3} b^{6}$ square yards. If the length of the park is $2 a^{3}$, what is the width of the park?

Which expression is equivalent to $\left(-5 a b c^{4}\right)\left(-3 a^{3} c^{2}\right)\left(-4 a^{2} b^{4} c^{3}\right) ?$
A $\quad-12 a^{6} b^{5} c^{9}$
B $\quad-12 a^{6} b^{4} c^{24}$
C $\quad-60 a^{6} b^{5} c^{9}$
D $-60 a^{9} b^{9} c^{9}$
8. Marlena was asked to find an expression that is not equivalent to $2^{12}$. Which of the following is not equivalent to the given expression?

F $\quad\left(2^{2}\right)^{6}$
G $\left(2^{8}\right)^{4}$
H $\quad\left(2^{6}\right)\left(2^{6}\right)$
J $\left(2^{3}\right)\left(2^{9}\right)$
10. The volume of a rectangular prism is $125 x^{3}$ cubic units, and the area of its base is $25 x^{2} y^{2}$ square units. What is the height of the prism in units if $x>0$ and $y>0$ ?

## Algebra 1 - Unit 6: Rational Exponents and Radical Expressions

## Practice Rational Exponents and Radical Expressions

1. What are two ways to write the square root of $x$ ?
2. Which expression is the equivalent to $(x y z)^{\frac{1}{2}}$ ?

A $\sqrt{x y z}$
B $x^{2} y^{2} z^{2}$
C $x y z^{\frac{1}{2}}$
D $\frac{1}{x^{2} y^{2} z^{2}}$
3. What is $\sqrt{36 x y}$ written as a fractional exponent?

Simplify each expression.
4. $\left(5 a^{\frac{-1}{2}} b^{\frac{-3}{2}}\right)^{2}=$
5. $\sqrt{49 x^{5} y^{6} z^{11}}$
6. $\left(a^{4} b c\right)\left(a^{9} b^{3} c^{21}\right)^{\frac{1}{3}}$
7. Which expression is greater $(-4)^{\frac{2}{3}}$ or $(-4)^{3}$ ? Explain your reasoning.
8. There is an error in the student work shown below. What is the error? Explain how to solve the problem.

$$
\begin{aligned}
& \left(12 a^{3} b^{4} c^{7}\right)^{\frac{1}{2}}= \\
& 12^{\frac{1}{2}} a^{\frac{3}{2}} b^{\frac{4}{2}} c^{\frac{7}{2}}= \\
& 2 a c^{3} \sqrt{3 a b c}
\end{aligned}
$$

Algebra 1 - Unit 6 Simplifying Polynomials

## Practice Simplifying Polynomials <br> Name <br> WHAT DO YOU CALLA FAKE NOODLE?

Write each expression in simplest form. Find the letter next to your answer in the column at the right. Write the letter of this answer in the box that matches that problem number. If the answer has a , shade in the box instead of writing a letter in it.

|  |  |  | Answers |
| :---: | :---: | :---: | :---: |
| 1. | $\left(-5 x^{2} y^{-1}\right)^{4}$ | 2. $\left(\frac{x^{2} y^{-2}}{x}\right)^{5}$ | $\begin{aligned} & \text { (N) } \frac{x^{5}}{y^{10}} \\ & \text { (A) } 8 \\ & \text { (A) } 12 x^{3} y^{4} y^{5} \sqrt{x} \\ & \text { (S } x^{6} \\ & \text { (D) } x^{10} y^{3} y^{9} z \\ & \text { A } \frac{625 x^{8}}{y^{4}} \end{aligned}$ <br> (I) 1 <br> (P) $x^{12}$ <br> (T) $x^{10} y^{20} z^{15}$ <br> (W) $\frac{z^{9}}{9}$ <br> (B) 64 |
|  |  |  |  |
|  | $\left(x^{2} y^{2} z^{-1}\right)^{3}\left(x y z^{4}\right)\left(x^{3} y\right)$ | 4. $\left(\frac{x^{3} y^{\frac{1}{2}} z}{x^{-5} y z^{23}}\right)^{0}$ |  |
|  |  |  |  |
|  | $\left(4 x^{3} y^{2}\right)\left(27 x^{3} y^{9}\right)^{\frac{1}{3}}$ | 6. $\left(x^{9}\right)\left(x^{3}\right)$ |  |
|  |  |  |  |
|  |  |  |  |
| 7. | $\left(\frac{28 x^{7} y^{4}}{7}\right)^{\frac{1}{2}}$ | 8. $\left(x^{4}\right)^{\frac{3}{2}}$ |  |
|  |  |  |  |
|  |  |  |  |
| 9. | $\left(\frac{x^{2} y^{4}}{z^{-3}}\right)^{5}$ | 10. $(4)^{\frac{3}{2}}$ |  |
|  |  |  |  |


| $\mathbf{1}$ | $\mathbf{2}$ | $\mathbf{3}$ | $\mathbf{4}$ | $\mathbf{5}$ | $\mathbf{6}$ | $\mathbf{7}$ | $\mathbf{8}$ | $\mathbf{9}$ | $\mathbf{1 0}$ |
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