


Lesson 3 Homework Practice

Multiply and Divide Monomials

<p>1.) BOOKS A publisher sells $10x^6$ copies of a new book. Each book has $5x^2$ pages. How many pages total are there in all of the books sold? Write an answer using exponents.</p> <p>a. Are you going to multiply or divide? What words/phrases led you to decide?</p> <p>b. Expression</p> <p>c. Expanded</p> <p>d. Exponential</p>	<p>2.) GEOMETRY The area of the rectangle in the figure is $100a^7b^4$ square units. Find the length of the rectangle</p> <p>a. Are you going to multiply or divide? What words/phrases led you to decide?</p>  <p>$20a^3b$</p> <p>b. Expression</p> <p>c. Expanded</p> <p>d. Exponential</p>
<p>3.) RABBITS Randall has $2a^3$ pairs of rabbits on his farm. Each pair of rabbits can be expected to produce $6a^5$ baby rabbits in a year. How many baby rabbits will there be on Randall's farm each year? Write your answer using exponents.</p> <p>a. Are you going to multiply or divide? What words/phrases led you to decide?</p> <p>b. Expression</p> <p>c. Expanded</p> <p>d. Exponential</p>	<p>4.) SEATING About how many times greater is the capacity of Madison Square Garden in New York, $40b^{12}$, than a typical movie theater, $2b^3$? Show all work using expanded form and write your answer in exponential form.</p> <p>a. Are you going to multiply or divide? What words/phrases led you to decide?</p> <p>b. Expression</p> <p>c. Expanded</p> <p>d. Exponential</p>

Simplify the expressions below. Make sure you answer only uses positive exponents.

5. $(-w)(-10w^3)$

6. $-7z^4(-3z^8)$

7. $(3ab^2)(a^2c^5)$

8. $(9p^{-4})(-8p^2)$

9. $\frac{12m^5}{4n^2}$

10. $\frac{14m^5}{7m^2}$

11. $\frac{9r^8}{3r^4}$

12. $\frac{24t^{-9}}{6t^3}$

13.) Choose a question from 5-12 and create a real-life word problem to match