Pre-Algebra Unit Review

Exponents

Complete the table:

Exponential Form	Expanded Form	Standard Form
8^3		
	$4 \times 4 \times 4 \times 4$	
		216
9^2		
	$2 \times 2 \times 2 \times 2 \times 2 \times 2 \times 2$	
		49

Order of Operations

Follow order of operations to evaluate (solve) each expression. Show every step.

$8 \div 2 \times 12$

$32 - 2 \times 12 + 4$

$26 - 9 \times 2$

$19 + 24 \div 8 \times 2$

$24 \div (5 + 3) + 2 \times 9$

$12 + (2^3 - 4)^2 + 1$

Prime vs. Composite

List the first 12 prime numbers

Divisibility Rules

Write the divisibility rule for each number.

2 _____

3_____

4 _____

5_____

6 _____

8_____

9 _____

10_____

At the carnival you write a number on a card. You receive a point for each of the following numbers that it is divisible by 2, 3, 4, 5, 6, 8, 9, and 10.

Sarah wrote 23,950

Kevin wrote 124,122

Anna wrote 62,424

Who won?

Jamie claims that 25,947 is a prime number. Use your divisibility rules to prove that she is incorrect.

Prime Factorization

Find the prime factorization of the following numbers. Write your answer in exponential notation.

45   92   81

Check your answers using the strategy that we discussed in class. Show your work.

45   92   81

LCM

What does LCM stand for?

_____   _____   _____

What does that mean?_____

GCF

What does GCF stand for?

_____   _____   _____

What does that mean?_____

Find the LCM of each pair of numbers.

| 12 and 18 | 8 and 12 | 6, 9 and 12 |

Find the GCF of each pair of numbers.

| 12 and 18 | 8 and 12 | 36 and 72 |

Word Problems

Tobey mows his lawn every 6 days. He also weeds his garden every 8 days. If he mowed his lawn and weeded his garden, how many days will pass until he weeds and mows on the same day again?

The student council is collecting supplies to send to the troops overseas. They have 96 pencils and 84 erasers. They want to package them so that each box has the same number of pencils in it and each box has the same number of erasers in it. What is the greatest number of boxes they can ship to the troops?

Find the next three numbers in the pattern.

9, 12, 24, 27, 54……….   18, 19, 21, 24, 28, 33…….

Division

Find the quotient of each division problem. Write your answer as a fraction or decimal.

$245 \div 5 =$ $9,475 \div 2 =$ $137 \div 3 =$

$45,936 \div 18 =$ $894 \div 56 =$