

Name _____

Unit 1 Math Review – Expressions and Equations 1 – Study Guide

Exponents	Write 8^3 as products and evaluate it.
	Write $7 \times 7 \times 7 \times 7$ as an exponent.
	$3^n = 81$
Order of Operations	Evaluate: $3 \times (3^2 + 4) - (10 + 17) \div 3^2$
Which operation should be in parentheses to make this equation true? $8 \times 3 + 2 + 4 \div 4 = 41$	
For a class assignment, Curtis and Kason had to evaluate the expression $3(2 + 2)^2 - 3$. Curtis said the answer is 141, and Kason said the answer is 45. Kason is correct. What did Curtis do wrong when he evaluated the expression?	

Commutative	
Associative	
Identity (+, -)	
Identity (\times , \div)	
Zero	
Distributive	Demonstrate Property
	Simplify 3×27 using the distributive property.
Words that mean add	Words that mean subtract
Words that mean multiply	Words that mean divide
Ways to represent multiplication:	Ways to represent division:
Write the expression: the product of a number and 3	
Write the expression that represents the phrase '6 times the quotient of a number q divided by 3'?	

Olivia started with an unknown amount of M&Ms. Her mother gave her 10 more. She then shared 3 with Alyssa and 2 with Jeffrey. Write an expression that shows how many M&Ms she had left at the end.

Combining Like Terms

$$3a^2 + 4 + 4a - 3 + 3a - a^2$$

Monomial

Example

Polynomial

Example

Variable

Coefficient

Example

Term

Circle the terms
Underline the coefficients
Square the variables

$$3x^2 + 2y + 3$$

Write an expression with at least 3 terms that shows a difference of terms?

Examine the expression below.

$$7 \cdot 3 + 4z \cdot 2$$

Name the terms that are being used to find a sum.

What is "substitution" in math?

Which expression does **not** have a value of 20 when $x = 2$?

- a. $20 - x$
- b. $x^2 + 16$
- c. $6x - 4$
- d. $12 + x^3$

Evaluate this expression if $x=3$ and $y=2$

$$3x+2(2x^2-4y)$$

Using complete sentences, explain the order of operations you used in the above expression

$$\frac{3x}{2y}$$

Evaluate the expression above by substituting 4 for x and 3 for y .

Equivalent Expressions	Write three equivalent expression to $6x + 11$ 1. 2. 3.
<p>Look at the 4 expressions below. Three of the expressions are equivalent.</p> <p>W: $8p - 4 - 1$</p> <p>X: $2 \cdot 2p - 5$</p> <p>Y: $6p - 5 + p$</p> <p>Z: $2p + 2p + 2p - 2 - 3$</p> <p>Simplify each expression and tell which is <u>not</u> equivalent to the others.</p>	

My student studied for the test for at least 30 minutes.

Parent Signature _____ Date _____