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| MC900237833[1] | **Math 6/7 Unit 3****Expressions** |
| Volume 1 Issue 3 |  |
| **References**Helpful Links:<http://thinkingblocks.com><http://www.khanacademy.org><http://www.arcademicskillbuilders.com><http://hoodamath.com><http://www.ixl.com/math/grade-6/evaluate-variable-expressions-with-whole-numbers><http://www.ixl.com/math/grade-6/evaluate-variable-expressions-involving-decimals-fractions-and-mixed-numbers>Georgia Math Grade 6 Plus Textbook Connection:Ch. 3, Lessons 1-7Georgia Math Grade 6 Textbook Online:connected.mcgraw-hill.com<https://www.mheonline.com/apps/> | Dear ParentsIn this unit students will: * Represent repeated multiplication with exponents
* Evaluate expressions containing exponents to solve mathematical and real world problems
* Translate verbal phrases and situations into algebraic expressions
* Identify the parts of a given expression
* Use the properties to identify equivalent expressions
* Use the properties and mathematical models to generate equivalent expressions

Concepts Students will Use & Understand* Variables can be used as unique unknown values or as quantities that vary.
* Exponential notation is a way to express repeated products of the same number.
* Algebraic expressions may be used to represent and generalize mathematical problems and real life situations
* Properties of numbers can be used to simplify and evaluate expressions.
* Algebraic properties can be used to create equivalent expressions
* Two equivalent expressions form an equation.

Vocabulary* **Algebraic expression**: A mathematical phrase involving at least one variable and sometimes numbers and operation symbols.
* **Associative Property of Addition**: The sum of a set of numbers is the same no matter how the numbers are grouped.
* **Associative Property of Multiplication:** The product of a set of numbers is the same no matter how the numbers are grouped.
* **Coefficient:**  A number multiplied by a variable in an algebraic expression.
* **Commutative Property of Addition:** The sum of a group of numbers is the same regardless of the order in which the numbers are arranged
* **Commutative Property of Multiplication:** The product of a group of numbers is the same regardless of the order in which the numbers are arranged.
* **Constant:**  A quantity that does not change its value.
* **Distributive Property:** The sum of two addends multiplied by a number is the sum of the product of each addend and the number.
* **Exponent:** The number of times a number or expression (called base) is used as a factor of repeated multiplication. Also called the power.
* **Like Terms:** Terms in an algebraic expression that have the same variable raised to the same power. Only the coefficients of like terms are different.
* **Order of Operations:** The rules to be followed when simplifying expressions.
* **Term:** A number, a variable, or a product of numbers and variables.
* **Variable:** A letter or symbol used to represent a number or quantities that vary

Try <http://intermath.coe.uga.edu/dictnary/homepg.asp> or <http://www.amathsdictionaryforkids.com/> for further examples. |
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| SymbolsExpression:8*x* + 4*y*Terms:8*x*4*y* | Example 1What is the value of the expression below when *m* = 5 and *n* = 0.5?*m*2 + (*n* + 6)Example 2Luci bought *n* ride tickets at the carnival. Bianca bought 4 times as many ride tickets as Luci. Write an expression that represents the total number of ride tickets that Luci and Bianca bought.Example 3Write an equivalent expression for 9(*p* + 8). Example 4Simplify the expression using exponents: 5∙5∙5∙5∙5∙5∙5∙n∙n + 4∙4∙4  |
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|  | **Key** **Example 1***m*2 + (*n* + 6); *m* = 5 and *n* = 0.5Substitute the variable with numerical value***m***2 + (***n*** + 6)**5**2 + (**0.5** + 6)Use orders of operations to solve**5**2 + (**0.5** + 6)**5**2 + 6.525 + 6.531.5**Example 2** *n* + 4n**Example 3** **9**(*p* + 8)Use the distributive property to write an equivalent expression**9**(*p*) + **9**(8)9*p* + 72**Example 4** 5⁷n²+ 4³ |
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