

# Math 6 - Unit 3: Expressions

## End of Unit Study Guide

Name: KEY

Class Period: 1 2 3 4 Date: \_\_\_\_\_

- What is the name of a number that multiplies a variable, such as the "9" in the term "9x"? COEFFICIENT
- Evaluate:  $(6^2 - 8 \div 4) + 27$   
 $(36 - 2) + 27 = 34 + 27 = 61$  61
- Write in exponential form:  $7 \cdot 7 \cdot 7 \cdot 7 \cdot 7 =$   
 $7^5$
- Evaluate  $n^2 + 4n + 4$  if  $n = 7$   
 $7^2 + 4(7) + 4 = 49 + 28 + 4 = 81$  81
- Write an expression that represents "12 more than a number?"  $n + 12$
- Simplify this expression by combining like terms:  $7n + 15n^2 + 13n - 14n^2$   
 $20n + n^2$
- The cost of attending a state fair is \$3.25 for admission, plus an additional \$0.25 for each ride ticket purchased. Write an expression to represent the cost of attending the fair and purchasing  $t$  tickets.  
 $3.25 + .25t$
- Which expression is NOT equivalent to the others? (Hint: Look closely at the operations.)  
 A)  $7(6 + 9)$     B)  $42 + 63$     C)  $7 \cdot 15$     D)  $7(6) \cdot 7(9)$  D
- Apply the distributive property to simplify the expression:  $12(5x + 3)$   
 $12 \cdot 5x + 12 \cdot 3 = 60x + 36$   $60x + 36$
- Evaluate the expression  $s^3$  if  $s = \frac{1}{3}$   
 $(\frac{1}{3} \cdot \frac{1}{3} \cdot \frac{1}{3}) = \frac{1}{27}$   $\frac{1}{27}$
- Evaluate "4 squared."  
 $4^2 = 16$  16
- The expression  $120 + 15n$  can be used to find the total price for  $n$  students to take a field trip to the science museum. Determine the cost if  $n = 3$  students to visit the science museum.  
 $120 + 15(3) = 120 + 45 = 165$  \$165
- Write an expression that is equivalent to  $30x + 5$ .  
 $5(6x + 1)$
- Translate into an algebraic expression: **nine less than the difference of seven squared and six.**  
 $(7^2 - 6) - 9$
- Danika and 4 of her friends order a large pizza for \$8 and  $n$  medium drinks for \$3 each. If they split these costs evenly, which expression can be used to find the amount each girl should pay?  
 $\frac{8 + 3n}{4}$
- Write an example of the **commutative property**?  
 $(3 + 2) = (2 + 3)$
- Label the parts of the expression:  $4n + 15$   
 coefficient: 4, Variable:  $n$ , constant: 15
- A family of four (2 adults and 2 kids) is going to the pumpkin patch. Regular admission is \$12 for adults and \$4 for kids. How much will they pay to get in?  
 $12(2) + 4(2) = 24 + 8 = 32$  32
- Simplify the expression  $7(n + 3) + 12n$   
 $7n + 21 + 12n = 19n + 21$   $19n + 21$
- What are like terms?  
Terms with same variable to the same power.