

**Math 6 - Unit 3: Expressions**  
End of Unit Study Guide

Name: KEY

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

- 1) What is the name of a number that multiplies a variable, such as the "9" in the term "9x"?  
**coefficient**
- 2) Evaluate:  $(6^2 - 8 \div 4) + 27$   
 $(36 - 8 \div 4) + 27 \rightarrow 34 + 27 = \boxed{61}$   
 $(36 - 2) + 27$
- 3) Write in exponential form:  $7 \cdot 7 \cdot 7 \cdot 7 \cdot 7 = 7^5$
- 4) Evaluate  $3n^2 + 4n - n$  if  $n = 7$   
 $3(7^2) + 4(7) - 7 \rightarrow 72 + 28 - 7 \rightarrow \boxed{93}$   
 $3(49) + 28 - 7$
- 5) Write an expression that represents "12 more than a number?"  
 **$n + 12$**
- 6) Simplify this expression by combining like terms:  $7n + 15n^2 + 13n - 14n^2 - n + 17n = \boxed{36n + n^2}$
- 7) The cost of seeing a movie is \$8.25 for admission, plus an additional \$2.25 for each snack purchased. Write an expression to represent the cost of seeing a movie and purchasing  $s$  snacks.
- 8) Translate into an algebraic expression: **nine more than the quotient of seven cubed and six.**
- 9) Melissa and 4 of her friends rent a movie for \$5 and buy  $n$  medium drinks for \$3 each. If they split these costs evenly, write an expression that can be used to find the amount each girl should pay?
- 10) If the formula for the area of a triangle is  $\frac{1}{2}bh$ , find the area of a triangle with a base of 15 and a height of 16.
- 11) Evaluate "4 cubed."
- 12) Simplify the expression  $7(n + 3) + 12n - 10$
- 13) What are like terms?
- 14) Apply the distributive property to simplify the expression:  $12(17x + 19)$
- 15) The expression  $120 + 0.30m$  can be used to find the total price for renting a car, where  $m$  represents the number of miles driven. Determine the cost if  $m = 130$  miles in the rental car.
- 16) Factor to write an expression that is equivalent to  $30x + 5$ .
- 17) Which expression is NOT equivalent to the others?  
A)  $7(6 + 9)$     B)  $42 + 63$     C)  $7 \cdot 15$     D)  $7(6) \cdot 7(9)$
- 18) Write an example of the **commutative property**?
- 19) Label the parts of the expression:  
 $4n + 15$
- 20) 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?