

## Math 6 - Unit 3: Expressions

### End of Unit Study Guide

Name: \_\_\_\_\_

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"?
  
- 2) Evaluate:  $(6^2 - 8 \div 4) + 27$
  
- 3) Write in exponential form:  $7 \cdot 7 \cdot 7 \cdot 7 \cdot 7 =$
  
- 4) Evaluate  $n^2 + 4n + 4$  if  $n = 7$
  
- 5) Write an expression that represents "12 more than a number?"
  
- 6) Simplify this expression by combining like terms:  $7n + 15n^2 + 13n - 14n^2$
  
- 7) 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.
  
- 8) 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)  $7(6) \cdot 7(9)$
  
- 9) Apply the distributive property to simplify the expression:  $12(5x + 3)$

10) Evaluate to find the volume of a cube with side length  $s = \frac{1}{3}$ ;  $V = s^3$

11) Evaluate "4 squared."

12) 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.

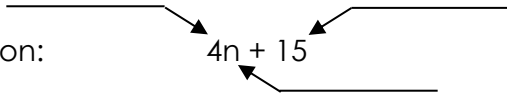
13) Factor to write an expression that is equivalent to  $30x + 5$ .

14) Translate into an algebraic expression: **nine less than the difference of seven squared and six.**

15) Neveah 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?

16) Write an example of the **commutative property**?

17) Label the parts of the expression:


$$4n + 15$$

18) 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?

19) Simplify the expression  $7(n + 3) + 12n$

20) What are like terms?