Math 6 - Unit 3: Expressions

End of Unit Study Guide

Name: ANSWER 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: $(6^2 - 8 \div 4) + 27$ $(36-8\div4)+27 = (36-2)+27 = 34+27 = \boxed{61}$

3) Write in exponential form: $7 \cdot 7 \cdot 7 \cdot 7 \cdot 7 = \boxed{7^5}$

4) Evaluate $n^2 + 4n + 4$ if $n = 7$ $7^2+4(7)+4 = 49+4(7)+4 = 49+28+4 = 77+4 = \boxed{81}$

5) Which expression represents "12 more than a number?" $\boxed{n+12}$

6) Simplify this expression by combining like terms: $7n + 15n^2 + 13n - 14n^2$ $7n+13n+15n^2-14n^2 = \boxed{20n+n^2}$

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. $3.25+.25(n)$

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) $7(6) \cdot 7(9)$ ← SHOULD BE ADDITION

9) Apply the distributive property to simplify the expression: $12(5x + 3)$ $\boxed{60x+36}$

10) Evaluate the expression s^3 if $s = \frac{1}{3}$ $\left(\frac{1}{3}\right)^3 = \frac{1}{3}\cdot\frac{1}{3}\cdot\frac{1}{3} = \boxed{\frac{1}{27}}$

11) Evaluate "4 squared." $4^2 = 4\cdot4 = 16$

12) The expression **120 + 15*n*** 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.
$120 + 15(3) = 120 + 45 = \boxed{\$165}$

13) Write an expression that is equivalent to **30x + 5**.
The product of 30 and x increased by 5.

14) Translate into an algebraic expression: **nine less than the difference of seven squared and six.**
$(7^2-6)-9$

15) 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?
$\frac{(8+5n)}{5}$

16) Write and example of the **commutative property**?
$2+5 = 5+2$

17) Label the parts of the expression: $4n + 15$ (4: COEFFICIENT; 15: CONSTANT; n: VARIABLE)

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?
$2(12) + 2(4)$
$24 + 8$
$\boxed{\$32}$

19) Simplify the expression $7(n + 3) + 12n$
$7n+21+12n = \boxed{19n+21}$

20) What are like terms?
TERMS WITH SAME VARIABLE TO THE SAME POWER