

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: $(6^2 - 8 \div 4) + 27$ $(36 - 8 \div 4) + 27 = (36 - 2) + 27$
 $34 + 27 = \boxed{61}$
- 3) Write in exponential form: $7 \cdot 7 \cdot 7 \cdot 7 \cdot 7 = 7^5$
- 4) Evaluate $3n^2 + 4n - n$ if $n = 7$ $3(7)^2 + 4(7) - 7 = 3(49) + 4(7) - 7$
 $147 + 28 - 7$
 $175 - 7$
 $\boxed{168}$
- 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. $\boxed{8.25 + 2.25n}$
- 8) Which expression is NOT equivalent to the others?
A) $7(6 + 9)$ B) $42 + 63$ C) $7 \cdot 15$ D) $7(6) \cdot 7(9)$ *THIS SHOULD BE ADDITION*
- 9) Apply the distributive property to simplify the expression: $12(17x + 19)$
 $12 \cdot 17x + 12 \cdot 19 = \boxed{204x + 228}$
- 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. $\frac{1}{2}(15)(16) = 3(15) = \boxed{45}$
- 11) Evaluate "4 cubed." $4 \cdot 4 \cdot 4 = \boxed{64}$
- 12) 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. $120 + .3(130) =$
 $120 + 39 = \boxed{\$159}$
- 13) Factor to write an expression that is equivalent to $30x + 5$. $\boxed{5(6x + 1)}$
- 14) Translate into an algebraic expression: **nine more than the quotient of seven cubed and six.** $\boxed{\frac{7^3}{6} + 9}$
- 15) 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? $\boxed{\frac{5 + 3n}{5}}$
- 16) Write an example of the **commutative property?** $(2 + 3) = (3 + 2)$
- 17) Label the parts of the expression: $4n + 15$
coefficient → $4n$ *constant* → 15
variable → n
- 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 $7(n + 3) + 12n - 10$ $\boxed{19n + 11}$
- 20) What are like terms?
 $\boxed{7n + 21} + \boxed{12n - 10}$
Terms that have the same variable to the same power.