Unit 3 PRE-Test

Name: _____

Hour: 1 2 3 4 5 6 7

1. Name the parts of the expression.

$6x + 5y + 8$

Constant: 8

Coefficient: 6, 5, _____

Variable: x, y

Terms: 6x, 5y, 8

2. Name the parts of the expression.

$4x + 6y - 7$

Constant: -7

Coefficient: 4, 6

Variable: x, y

Terms: 4x, 6y, -7

3. Evaluate the expression for $m = 4$

$60 - 2m$

$60 - 2(4)$

$60 - 8$

52

4. Evaluate the expression for $x = 2$ and $y = 6$

$x^3 + (y + 4) \div x$

$2^3 + (6+4) \div 2$

$2^3 + 10 \div 2$

$8 + 10 \div 2$

$8 + 5$

13

Evaluate the expression.

5. Use the expression $d \div g$ to find the gas economy of a car in miles per gallon (mpg), where d is the distance traveled, and g is the gallons of gas used.

Find the gasoline economy figure for a car that travels 340 miles on 10 gallons of gasoline.

$\frac{340\text{ mi}}{10\text{ gal.}} = \frac{34\text{ mi}}{1\text{ gal}}$

MUST SHOW WORK

6. **Choose the expression** that describes the relationship of the data in the table.

A: $n + 8$

B: $5n$

C: $8n$

D: $^n/_4$ (same as $n \div 4$)

n	
2 (+3, ×5)	10
3 (×5)	15
4 (×5)	20
5 (×5)	25

7. **Choose the expression** that describes the relationship of the data in the table.

A: $a + 1$

B: $a + 3$

C: $a + 12$

D: $a + 17$

Tom's Age (a)	Kim's Age
12 +3	15
13 +3	16
14 +3	17
a +3	?

8. Choose the expression for the sequence in the table.

Position (n)	1	2	3	4	5	n
Value of Term	5	8	11	14	17	?

+3

A: $4n$ B: $n + 4$ C: $2n - 1$ D: $3n + 2$

9. Write TWO WORD expressions for the expression $y - 16$

a. the difference of y and 16.

b. 16 less than y.

10. Write the phrase "24 groups of y" as an algebraic expression.

24y

11. Susie has 6 times as many games as both Tammy and Jamie combined. If Tammy has t games and Jamie has j games, which expression shows how many games Susie has?

A: $t + j$ C: $t + 6j$

B: $6t + j$ D: $6(t + j)$

12. Which expression is equivalent to

$$2(x + y)$$

A: $2xy$ C: $2x + y$

B: $2x + 2y$ D: $2xy + 2xy$

13. Simplify the expression by combining Like Terms.

$$6x + 5 - 2x - 4 + 6x + 8$$

$10x + 9$

14. Select ALL of the expressions that are equivalent to

$$c + c + 4 + c + c$$

$4c + 4$

$4c^4$ $4 + 4c$ $4 + 4c^4$ $4(1 + c)$

15. Simplify the expression using the Distributive Property

$$3(x + 5)$$

$3 \cdot x + 3 \cdot 5$

$3x + 15$

16. Which expression is equivalent to

$$9(x + 3x) - 1$$

$9(4x) - 1$

A: $11x$ C: $36x - 1$

B: $12x - 1$ D: $36x - 9$

17. Select ALL of the expressions that are equivalent to $8(t + 4)$ $8t + 32$

$8t + 32$ $2(4t + 2)$ $4t + 4 + 4t$

$(8 \times t) + (8 \times 4)$ $(8 + t) + (8 + 4)$

18. Find the GCF from a Division Ladder & rewrite the expression using the Distributive Property.

$5 \mid 20 + 35$

$4 + 7$

$5(4 + 7)$

19. Write the expressions in the appropriate boxes

Equivalent to $3y + 3$		NOT Equivalent to $3y + 3$
$3(y+1)$	$3(y) + 1$ →	$3(y) + 1$
$2y+y+3$	← $3(y + 1)$	$3(y) + 1y$
	$3(y) + 1y$ →	
	← $2y + y + 3$	