Name _____ Class _____ Date _____

SELECTED RESPONSE

1. Lucinda is arranging 150 patio blocks to build a patio. Let p represent the number of patio blocks Lucinda arranged in one hour. Which equation describes the relationship between p and h, the total number of hours Lucinda needed to arrange all 150 patio blocks?

   A. $h = 150 + p$ **C.** $h = 150p$

   B. $h = \frac{150}{p}$ **D.** $h = 150 - p$

2. Which expression is NOT equivalent to the expression $45 - 18$?

   F. $3(15 - 6)$ **H.** $(5 - 2)\,9$

   G. 27 **J.** $9(5 - 18)$

3. Erik made a model train that was 25 feet shorter in length than an actual train. Let m represent the length of Erik's model. Which expression represents the length of the actual train?

   A. $25 - m$ **C.** $m + 25$

   B. $25m$ **D.** $m - 25$

4. Last week Randy worked 42 hours in 5 days. Which equation could Randy use to find the average number of hours he worked each day?

   F. $\frac{h}{5} = 42$ **H.** $\frac{h}{42} = 5$

   G. $5h = 42$ **J.** $42h = 5$

5. Which expression is equivalent to $3x - 4 + 2(2 + 4x)$?

   A. $11x$ **C.** $9x$

   B. $11x - 8$ **D.** $9x - 8$

6. Mark has been asked to find the value of $4(9 + 24) + 7$. What should he do first?

   F. Add 4 and 7.

   G. Multiply 4 and 9.

   H. Multiply 4 and 24.

   J. Add 9 and 24.

7. The new county park has an area that is 3.5 times the area of the old park. Let p represent the area of the old park. Which expression represents the area of the new park?

   A. $3.5p$ **C.** $p + 3.5$

   B. $p - 3.5$ **D.** $\frac{p}{3.5}$

8. Write the expression $7 \times 7 \times 7 \times 7 \times 7$ in exponential form.

   F. 7^4 **H.** 5^7

   G. 16,807 **J.** 7^5

9. Evaluate the expression $24x - 13y$ for $x = 3$ and $y = 2$.

   A. 11 **C.** 37

   B. 33 **D.** 46

10. Which expression does **not** equal 15?

    F. $3k$ for $k = 5$

    G. $3 + k$ for $k = 12$

    H. $\frac{k}{3}$ for $k = 60$

    J. $k - 10$ for $k = 25$

11. What is $8 \cdot 8 \cdot 8 \cdot 8$ written in exponential form?

A. 32 **C.** 4,096

B. 8^4 **D.** 4^8

12. Find the value of 3^5.

F. 25 **H.** 81

G. 125 **J.** 243

13. Simplify $12 + 3(18 - 4^2) + 9$.

A. 39 **C.** 27

B. 217 **D.** 59

14. Simplify $(25 + 20) \div 5 + 2^2$.

F. 13 **H.** 33

G. 5 **J.** 121

15. Which is an example of the Distributive Property?

A. $7(34) = 7(3) + 7(4)$

B. $7 + (3 + 4) = (7 + 3) + 4$

C. $7(34) = 7(30) + 7(4)$

D. $7 + (3 + 4) = 7 + (4 + 3)$

16. $(18 + 13) + 7 = 18 + (13 + 7)$ is an example of which property?

F. Commutative

G. Associative

H. Distributive

J. Identity

CONSTRUCTED RESPONSE

17. Write two different phrases in words that describe the expression $7z$.

18. Layne sends an email to 7 people and those 7 people send the email to 7 more people, and so on. Write an expression to show the number of people who will receive the email after the fifth round.

19. Consider the expression:

$(28 \div 4) \cdot 5 - 6 + 4^2$.

Explain the order of operations you would use to simplify this expression. Then simplify it.

20. The table shows the time Sue spent tutoring two of her students and how much she was paid.

Sue's Tutoring		
	Hours	Pay
Will	3	$27
Hector	8	$72

Write an expression to show how much Sue will earn in h hours. How many hours must Sue tutor to earn $45? Justify your answer.