Pre-Algebra
Mid-Term Cumulative Test

Name:_____ **Date:**_____

Multiple Choice.

_____ 1. Which equation illustrates the identity property of multiplication?

A. $(xy)z = x(yz)$ **B.** $x \cdot 0 = 0$ **C.** $x \cdot 1 = x$ **D.** $\frac{2}{3} \cdot \frac{3}{2} = 1$

_____ 2. What is the LCM of 18 and 24?

A. 6 **B.** 48 **C.** 72 **D.** 504

_____ 3. List from least to greatest?

A. $\frac{2}{3}, \frac{31}{50}, .61, \frac{3}{5}$ **B.** $\frac{3}{5}, .61, \frac{31}{50}, \frac{2}{3}$ **C.** $\frac{2}{3}, .61 \frac{3}{5}, \frac{31}{50}$ **D.** $\frac{2}{3}, \frac{3}{5}, \frac{31}{50}, .61$

_____ 4. In which quadrant is the point (-9, 6) located?

A. I **B.** II **C.** III **D.** IV

_____ 5. Which property is best illustrated by the statement $-5(z+1) = -5z - 5$?

A. Identity Property of Multiplication **B.** Commutative Property of Multiplication
C. Distributive Property **D.** Associative Property of Multiplication

_____ 6. Which expression is equivalent to $5a + 8 - 2(a + 4)$?

A. 3a **B.** 3a + 4 **C.** 3a + 12 **D.** 3a + 16

_____ 7. What is the value of $\frac{x}{-2}(4y - z) + 6$ when x = -12, y = -2 and z = -3

A. 24 **B.** -30 **C.** -24 **D.** 36

_____ 8. Which number is not a coefficient of n in the expression $3n + 8 - n + 4n$?

A. -1 **B.** 1 **C.** 3 **D.** 4

_____ 9. Which equation does not have 6 as a solution?

A. $x+5=11$ **B.** $3-x=-3$ **C.** $7t=42$ **D.** $\frac{24}{x}=3$

_____ 10. What is the value of $|-3x|+|2y|$ when x = -4 and y = -8

A. 24 **B.** 30 **C.** 28 **D.** 4

_____ 11. What is the least common denominator of $\frac{3}{4}$, $\frac{2}{3}$, and $\frac{1}{6}$?

A. 3 **B.** 6 **C.** 12 **D.** 24

_____ 12. Which expression represents 6 more than 3 times a number n.

A. 6(3n) **B.** 3n + 6 **C.** 3(6 + n) **D.** 6 + 3 + n

_____ 13. Which equation represents the sentence one half a number n is 12.

A. 2n = 12 **B.** $\frac{1}{2}n=12$ **C.** $\frac{2}{n}=12$ **D.** $\frac{12}{x}=2$

Simplify.

14. $3\frac{5}{8}+\frac{2}{3}$

15. $\frac{4}{9}+\frac{16}{6}\div\frac{4}{7}$

16. $(2x-7)-(7x-3)+2$

17. $-3(y-4)+5y$

18. $2x + 4 - x - 4(1 - x)$

19. $|-45| - |-25| + 10$

Solve.

20. $-3x = 6$

21. $\frac{y}{6} = -\frac{1}{12}$

22. $-34 + x = 17$

23. $x + 46 = -54$

24. One type of thermal ice drill can drill through ice at a rate of 15 feet per minute by using heat to melt the ice. Find the time (t) it takes the drill to melt through a sheet of ice 75 feet thick.

a. finish the equation _____ $\cdot\, t =$ _____

b. solve the above equation for t.

25. Write the property that best identifies each situation/equation.

$(x+4)(-3) = -3(x+4)$ _____

$5(x+4) = 5x+20$ _____

$6 \cdot \frac{y}{6} = 3 \cdot 6$ _____