TEST NAME: **Math 1/8 Unit 1 Study Guide JT Williams**
TEST ID: **2582029**
GRADE: **08 - Eighth Grade - 09 - Ninth Grade**
SUBJECT: **Mathematics**
TEST CATEGORY: **School Assessment**

schoolnet

Student: _____

Class: _____

Date: _____

1. Solve

   $54 \div 6 + 2(8 - 3 \cdot 4)$

2. $5(13 - 8) - 3 \cdot 7 + 3$

3. $24 - 24 \div 3 + 1$

4. $6 \cdot 3 + 4 \cdot 8 - 33$

5. $40 + 52 - 7 \cdot 4$

6. Simplify each and match to corresponding answer.

Questions	**Answer Choices**
1. $-3p - (-8 + 4p)$	**A.** $24p - 40$
2. $-4 + 6(-4p + 3)$	**B.** $14 - 24p$
3. $-3(8 - p)$	**C.** $3p - 24$
4. $-8(5 - 3p)$	**D.** $15p + 18$
5. $-2 + 5(4 + 3p)$	**E.** $8 - 7p$

7. $(-5) + (-3)$

8. $(-3) - 8$

9. $3 - (-5)$

10. (-2)(-5)(-7)(8)

11. -72 ÷ -9

12. How many terms are in the simplified expression $24x^3 + 25x - 6x - 16x + 13$?

    A. 3

    B. 4

    C. 2

    D. 5

13. What are the term(s), coefficient, and constant described by the phrase, "the cost of 6 tickets to the football game, t, and a service charge of $10" ?

    A. term: 6t, coefficient: 6, constant: 10

    B. terms: 6t and 10, coefficient: 6, constant: 10

    C. terms: 6t and 16, coefficient: 16, constant: 6

    D. term: 6t, coefficient: 16, constant: none

14. Write an algebraic expression and then identify the terms, coefficients, constants, and factors:

    Eddie purchased 4 packages of light bulbs and received a 15% discount. He also paid $4.85 in taxes on his purchase. Write an algebraic expression to represent the total amount Eddie paid. Let x represent the cost of each package purchased.

15. Write an algebraic expression and then identify the terms, coefficients, constants, and factors:

    Colin bought 2 theater tickets and paid a service charge of 5% for buying them from a ticket broker. Write an algebraic expression to represent the total cost of the tickets. Let x represent the cost of each ticket.

16. Simplify and identify/match the terms, coefficients, constands and factors:

Questions	Answer Choices
____ **1.** terms	**A.** 13
____ **2.** coefficients	**B.** 13x, 20
____ **3.** constants	**C.** 13 and x
____ **4.** factors	**D.** 20

17. You have no more than $65 to spend. You want a drink that costs $2.25 including tax, and you want to buy a pair of shoes, which will have 7% sales tax. What is the inequality that represents the amount of money you have to spend?

A. $x + 0.07x + 2.25 > 65$

B. $x + 0.07x + 2.25 \leq 65$

C. $x + 0.07x + 2.25 < 65$

D. $x + 0.07x + 2.25 \geq 65$

18. You are participating in a fund-raiser in which you run for donations. People can donate money based on a flat fee or based on the number of miles you run. So far, you have two donors. Your grandma has agreed to donate $15 and your mom has agreed to donate $1.70 per mile. If together they donated $20.10, what equation represents this situation?

A. $(15 + 1.70)x = 20.10$

B. $1.70x + 15 = 20.10$

C. $20.10x = 15 + 1.70$

D. $15x + 1.70 = 20.10$

19.
19. It costs Marcus an access fee for each visit to his gym, plus it costs him $3 in gas for each trip to the gym and back. This month it cost Marcus $108 for 6 trips to his gym. How much is Marcus's access fee per visit?

20.
20. Jeff is saving to purchase a new basketball that will cost at least $88. He has already saved $32. At least how much more does he need to save for the basketball?

21.

21. Arianna buys computer games from an online store. Each game she orders costs $22, and shipping for her total order is $9. Arianna can spend no more than $75. How many computer games can Arianna buy?

22.

22. Suppose you earn $15 per hour working part time as a carpenter. This month, you want to earn at least $950. How many hours must you work?

23.

23. Rebecca bought x pairs of socks and received a 20% discount. Each pair of socks cost her $4.99. Her total cost without tax was $29.94. How many pairs of socks did Rebecca buy?

24. What is the solution to the equation $-8x + 3(5x - 1) + 15 = -5x + 6$?

24.
  a. $x = -0.7$
  b. $x = -0.5$
  c. There are no solutions to this equation.
  d. $x = -3$

A. x = -0.7

B. x = -0.5

C. There are no solutions to this equation.

D. x = -3

25. What is the solution to the inequality $\dfrac{5x}{8} + 5 < x - 7$?

25.
  a. $x < 32$ c. $x \geq 32$
  b. $x \leq 32$ d. $x > 32$

A. x < 32

B. x ≤ 32

C. x ≥ 32

D. x > 32

26. Amelia and 2 of her friends went out to lunch. Each girl ordered exactly the same
26. meal. The total cost was $55.08, which included an 8% tax. What was the price of
    each meal, not including tax?

27. Solve for y.

    4y +24 = 40x

28. 28.
    The formula for calculating speed traveled is $d = st$, for which s represents the speed traveled and t
    represents the time traveled. Solve this formula for s.

    a. $s = \dfrac{t}{d}$ c. $s = t - d$

    b. $s = d - t$ d. $s = \dfrac{d}{t}$

    A. $s = \dfrac{t}{d}$

    B. $s = d - t$

    C. $s = t - d$

    D. $s = \dfrac{d}{t}$

29. 29. The formula for calculating distance given rate of speed and time is $d = rt$. Solve
        this formula for r.

30. 30. The formula for calculating simple interest is $I = prt$. Solve this formula for t.

31. 31. The formula for calculating the volume of a square pyramid is $V = \dfrac{1}{3}b^2h$. Solve
        this formula for h.