Test 2 Review: Solving 1, 2 & Multi-Step Equations

Vocabulary: Define the following words.
1. Expression_______________________________________________________________________
2. Equation___________________________________________________________________________
3. Solution of an Equation______________________________________________________________
4. All Real Numbers____________________________________________________________________
5. No Solution__________________________________________________________

SOLVE. Show all work. Circle or box in your answer.

6. \( \frac{2}{5} x - 9 = -7 \)  
7. \( 87 - 3x = -13x \)  
8. \( 4h + 9 = 14 \) 

9. \( \frac{y}{8} - 5 = -3 \) 
10. \( 1.2h + 6 = 9.6 \) 
11. \( 4(b - 7) = 4b + 5 \)

12. \( -6(x - 8) = 78 \) 
13. \( 10x + 4 = 2(5x+2) \) 
14. \( 3x - 5 = 2x - 9 \) 

15. \( -6x - 7 = -2(3x + 5) \) 
16. \( 8x - (6x - 2) = -2 \) 
17. \( -4(2x-3) = -6x + 12 - 2x \)

Word Problems

18. Which of the equations below represents the next step of the solution process?
   Original: \( 3(5x + 2) + 4 = -35 \)
   A. \( 15x + 2 + 1 = -35 \)  
   B. \( 15x + 6 + 12 = -35 \)  
   C. \( 15x + 6 + 4 = -35 \)  
   D. \( 3(5x + 6) = -35 \)
19. The sum of eight and twice a number is fourteen.
   Equation: __________________
   Solution: __________________

20. A photographer charges $50 for a sitting and a basic package of photos. Additional 5 \times 7 \text{ pictures} cost $8 each. How many extra 5 \times 7 \text{ pictures} can you purchase if you spend a total of $96?
   Equation: __________________
   Solution: __________________

21. Luis deposited $500 into his bank account. He now has $4732. Write and solve an equation to find how much was in his account before the deposit.
   Equation: __________________
   Solution: __________________

22. Michael bought a beautiful bouquet of flowers for $62.75 (not including tax). If he bought them while there was a 30\% \text{ off} special, what was the original price of the flowers?
   Equation: __________________
   Solution: __________________

23. The total cost of a DVD was $16.21. If the rate of sales tax was 8.125\%, what was the original price of the DVD?
   Equation: __________________
   Solution: __________________

24. Sara found a great deal on Jolly World tickets where if she purchases a ticket the regular cost of $64, each additional ticket purchased will only cost $48. If the total charge came to $256, how many tickets did she buy?
   Equation: __________________
   Solution: __________________

25. The width of a rectangle is 9 cm less than twice the length. The perimeter is 72 cm. What is the length and width of the rectangle?
   Equation: __________________
   Solution: __________________

26. The length of a rectangle is 5 times the width. The perimeter is 84 feet. What is the length and width of the rectangle?
   Equation: __________________
   Solution: __________________