Name:_____ Date:_____

Algebra 1 Unit TWO Test

Directions: Show all work.

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1. Determine whether each number is a solution to the equation $5x - 2 = x + 10$
   a) 6   b) 3

Solve each equation.

2. $x - \dfrac{1}{5} = \dfrac{1}{3}$

3. $\dfrac{7}{5}g = 35$

4. $-7x - 14 + 8x - 3 = -24$

5. $\dfrac{2}{7}f = 12$

6. $14x = -6x - 64$

7. $10k - 5 - 4k - 2k = 45 - 6$

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Solve each equation.

8. $-6(2d - 4) = 66$

9. $-(x - 17) = 25$

10. $\frac{1}{8}(16h - 32) = 7 - 2(6h - 1)$

11. $7(3a - 4) - 6(4a - 3) = 20 - 4a$

12. $\frac{1}{5}h - \frac{1}{10} = \frac{1}{2}$

13. $0.2c + 0.75(c + 12) = -10$

14. $15f - 2(5f + 6) = -10 + 2(f - 5)$

15. $8(3y + 4) - 3[7 - 8(y - 2)] = 5(y - 2)$

Solve the formula x − 3y = 7 for y	
16. when x = -4	17. In general

Graph on the number line and write in interval notation.	
18. $x \geq -4.3$	19. $x < \frac{12}{5}$

Solve each inequality, graph the solution on the number line, and write the solution in interval notation.	
20. $10x \geq 5x - 110$	21. $5b - 10(b - 3) < 5b + 13$

Translate to an equation or inequality and solve.	
22. 5 less than three times x is 20	23. Twenty more than x is at least 54.

Translate to an equation or inequality and solve.

24. Jake paid $74.94 for gas this week, which was $4.87 less than he paid for gas last week. How much had he paid last week?

25. John bought a piano on sale for $1,500, which was 1/3 of the original price. What was the original price of the piano?

26. Sally took a 422-mile bus ride from her home to New York. If the trip took 6.5 hours, what was the speed of the bus? Round your answer to the nearest mile per hour.