Unit 2 Review

I.    Solving Equations

       1.  x-4 = 30

       7.  $4(5x - 3) = 7(2x + 3)$

       2.  $\dfrac{2}{5}t = -10$

       8.  $7n - 3(6 + 2n) = 3(n - 8)$

       3.  6x + 4 = 20 – 2x

II.    Solving Proportions

       9.  $\dfrac{3}{4} = \dfrac{t + 3}{t - 8}$

       4.  5x + 4 = 2x + 17

       10.  $\dfrac{16}{3 - w} = \dfrac{8}{w + 5}$

       5.  5(x + 2) = 25

       11.  $\dfrac{2x - 5}{3} = \dfrac{3x - 8}{5}$

       6.  2(2x + 10) = 40

III.    Solving One Variable Word Problems

12. Nick opens a savings account with $50.  Each week after, he deposits $15.  In how many weeks will he have saved $500?
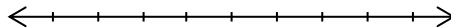
13. Ben rents a car for one day.  The charge is $20 plus the $0.12 per mile.  He wants to spend exactly $80.  How many miles can he drive?

14. Joe went to the hobby shop and bought 2 model sports cars at $8.95 each and some paints.  If he spent a total of $23.65, what was the cost of the paints?
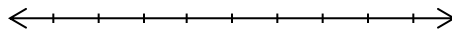
IV.    Solving Inequalities
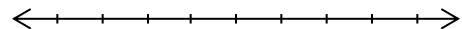- Graph and write the interval notation for the inequalities
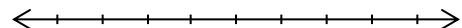15. $x \geq -4$



16. $p \leq 11$



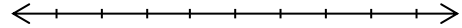- Solve, graph, and write the interval notation for the inequality
17. $n + 10 < 14$



18. $2x > -8$
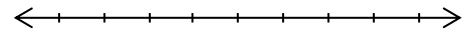
19. $-2x - 8 > -10$



20. $-4x + 2x + 10 \leq 2(2x + 17)$



V.  Solving Word Problems

21. Keith and Michelle went out to dinner. The total cost of the meal, including the tip, came to $53.70. If the combined tip came out to $9.60, and each friend spent an equal amount, how much did each friend pay not including the tip?
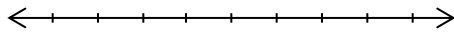
a.  Write the equation

b.  Solve the equation

22. Adrian works in New York City and makes $42 per hour. She works in an office and must get her suit dry cleaned every day for $75. If she wants to make more than $260 a day, *at least* how many hours must she work?

a. Write the inequality

b. Solve the inequality

c. Graph the inequality



d. Write the inequality interval

VI.     Solving Literal Equations

23. $6 = mx + b$     for $x$

24. $x = \dfrac{4 - k}{6}$     for $k$

25. $cx\text{-}d = a(x - y)$   for $y$