ALG III   Name:_____
2.1 & 2.3 Solving Linear Equations   8/22/17

Solve each equation on a separate sheet of paper. Quality work!

1. $6x - 4(3 - 2x) = 5(x - 4) - 10$

2. $-[6x - (4x + 8)] = 9 + (6x + 3)$

3. $\dfrac{8x}{3} - \dfrac{5x}{4} = -13$

4. $\dfrac{2x - 3}{7} + \dfrac{3}{7} = -\dfrac{x}{7}$

5. $\dfrac{3x - 1}{4} + \dfrac{x + 3}{6} = 3$

6. $0.05x + 0.12(x + 5000) = 940$

7. $0.006(x + 2) = 0.007x + 0.009$

8. $0.09x + 0.13(x + 300) = 61$

9. In the 2008 presidential election, Barack Obama and John McCain together received 538 electoral votes. Obama received 192 more votes than McCain. How many votes did each candidate receive?

10. In 1995, the average cost of tuition and fees at private four-year universities in the United States was $2811 for a full-time student. By 2005 is had risen approximately 95%. To the nearest dollar, what is the approximate cost in 2005?

11. In chemistry class, 12L of a 12% alcohol solution must be mixed with a 20% solution to get a 14% solution. How many liters of the 20% solution are needed?

12. How many liters of a 10% alcohol solution must be mixed with 40L of a 50% solution to get a 40% solution?