Instructions: Record your answers to each of these problems directly on this page. Do the work on a separate page and attach these pages to this one. You should do the work by hand, but you may check your work with a calculator.

1. Solve for x in $x + 28 = 54$

2. Solve for x in $7x = 56$

3. Solve for the variable in each equation
    a. $7 + t = -18$
    b. $7x - 3 = 25$
    c. $-x - 6 = -8$
    d. $2x - 4 + 3x + 5 = (2 + 3)x + (-4 + 5)$

4. Solve the equation, round to the nearest tenth. $9(x - 4) + 13 = 4x + 12$

5. Find the mean of: 72, 83, 85, 88, 92

6. Solve for the variable in the following equations.

    a) $12 = 8 + \dfrac{7}{2}t$ \qquad b) $9 = a + \dfrac{47}{10}$ \qquad c) $\dfrac{11}{5}t + \dfrac{36}{5} = \dfrac{7}{2}$

7. Convert the following temperatures. $C = \dfrac{5}{9}(F - 32)$
    a. 3°C is how many degrees Fahrenheit?
    b. -5°C is how many degrees Fahrenheit?
    c. 98.6°F is how many degrees Celsius?
    d. -10°F is how many degrees Celsius?
    e. What is room temperature in Celsius?
    f. At what temperature are the Fahrenheit and Celsius scales the same?

8. Le Grand Chocolate Shop is preparing Valentine boxes. How many pounds of truffles will be needed to fill 75 boxes if each box contains $\dfrac{2}{5}$ lbs.?

9. A package of coffee beans weighed $\dfrac{21}{32}$ lbs. when it was ¾ full. How much could   the package hold when it was completely full?

10. Use a number line to explain why the result of subtracting 3 − (−4) is the same as the result of adding 3 + 4?

11. Explain how the solution methods for $-2q = 34$ and $q - 2 = 34$ are different.

12. Simplify. $\dfrac{\dfrac{3}{4}-\dfrac{3}{5}}{\dfrac{1}{4}+\dfrac{2}{5}}$

13. Evaluate $4p^2q$ when $p = -\dfrac{1}{2}$ and $q = \dfrac{5}{9}$

14. Solve $-\dfrac{2}{5} = x + \dfrac{3}{4}$

15. Solve $-4.2a = 3.36$

16. Find the simple interest earned after 4 years on $900 at an interest rate of 6%.

17. Find the principal invested if $10,953.70 interest was earned in 5 years at an interest rate of 11.04%.

18. Josiah went to Mexico for spring break and changed $325 dollars into Mexican pesos. At that time, the exchange rate had $1 U.S. is equal to 12.54 Mexican pesos. How many Mexican pesos did he get for his trip?

19. Oxana bought a dresser at a garage sale for $20. She refinished it, then added a 250% markup before advertising it for sale. What price did she ask for the dresser?

20. Graph the following inequalities on a number line.
    a. $x \le 10$ d. $x > -5$
    b. $-5 < x < 20$ e. $0 \le x < 15$
    c. $x < 0$ or $x \ge -1$

21. Solve the inequalities and draw the solution on a number line.
    a. $-15x + 34 < 15$ d. $-23x + 1 < -3$
    b. $2(-3x + 1) < 14$ e. $-7(x - 2) + 1 < 15$
    c. $-22 < 5x + 3 \le 3$ f. $-32 \le 14(12x - 1) + 34 < 32$