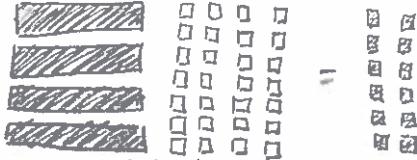## Solving Linear Equations Final Exam Review

- **Introduction/ Review**
    a. Model using algebra tiles.

    2x = -8

    b. Solve the equation.

    c. Solve and check.

    48 – 2x = -8 $\underline{x}$= 12

                              8

- **Solving ax = b, $\underline{x}$ = b, $\underline{a}$ = b**

                    a   x

    a. Solve.

    8x = $\underline{-20}$ $\underline{12}$ = $\underline{2x}$

           24   10   8

    b. Solve and Check.

    -22.4x = 14

    c. Speed is given by s = d, where d is the distance travelled and t is the time. If a car travels 90 km/h for 3.7 h, what distance does it travel?

    d. A regular polygon has a perimeter of 73.8 cm and a side length of 12.3 cm. Identify the polygon.

    e. You spend 25% of your net income on food and 55% on rent. If you spend $1875 per month on rent and food what is your monthly net income?

- **Solving ax + b = c, $\underline{x}$ + b = c**

                              a

    a. Solve.

    16x – $\underline{4}$ = $\underline{6}$ 4 $\underline{1}$ = 16x + $\underline{4}$

             5   5   2   3

    b. Solve and Check.

       $\underline{2x}$ + 10 = -4

       2.4

    c. The cost of cable is $95 per month plus $5.99 per speciality channel package. How many channel packages does a customer have if they pay $ 112.97 per month?

    d. The temperature in Edmonton was 12°C and was dropping 1.2°C/h. How many hours did it take to reach 2.4°C?

- **Solving a(x + b) = c**
  a. Solve and check.

  $$8(x + 6) = 30.4 \qquad \frac{3}{4}(x + 8) = 4\frac{1}{3}$$

  b. The mean of two numbers is 3. One of the numbers is 12.8 what is the other number?
  c. You are buying four cans of paint using a coupon that takes $2.25 from each can. If you pay $134.80 all together, what is the regular price of each can?

- **Solving ax = b + cx, ax + b = cx + d, a(bx + c) = d(ex + f)**
  a. Solve.

  $$\frac{1}{2}x = \frac{4}{3} + \frac{2}{3}x \qquad 0.8(16y + 12) = 2.4(16y - 2)$$

  b. Solve and Check.

  $$2x = 6.4 + x \qquad 8(2x - 0.4) = 12(1.2 - 2x)$$

  c. A jar contains 44 more nickels than dimes. The total value is $5.95. How many of each coin are there?
  d. Two cars leave Edmonton at the same time. Car A goes 100 km/h, Car B goes 110 km/h. Car B reaches the destination 25 minutes before A. How long does it take for each car to reach the destination?

Questions to Review
Chapter 8 Get Ready
Pg.   301 # 6 – 11
        302 # 12 – 25 (I would look at these!!!)
        311 # 7 – 12
        312 # 13 – 25, 29, 30 (I would look at these!!!)
Linear Equations Assignment 1
Linear Equations Quiz
Pg.   319 # 6 – 9
        320 # 12 – 22, 25 (I would look at these!!!)
        327 # 6 – 12
        327 #13 – 21 (I would look at these!!!)
Linear Equations Assignment 2
Linear Equations Test