SECTION 2.1 **Math 1090 Worksheet** FALL 2009

For practise only. Not to be submitted.

1. Solve each of the following equations.

   (a) $\dfrac{3}{2}x - \dfrac{1}{3} = \dfrac{5}{6}$

   (b) $x - 1 = 1 - x$

   (c) $\dfrac{1}{4}(x - 6) = -\dfrac{1}{2}(2x + 3)$

   (d) $1 - 5(x - 1) = 3(x + 4) - 2x$

2. Sketch the graph of each of the following *without* constructing a table of values. Label all important points. What is the slope of each line?

   (a) $f(x) = 2 - x$

   (b) $2x - 3y - 12 = 0$

3. A line passes through the point $\left(\frac{1}{2}, -5\right)$. Find an equation of this line if it

   (a) is horizontal

   (b) has slope $m = 4$

4. Find an equation of the line passing through the points $(2, -6)$ and $(-1, 3)$.

5. The line ℓ_0 has equation $3x + 2y = -1$. Find an equation of the line ℓ passing through the point $(-6, 5)$ which is

   (a) parallel to the line ℓ_0

   (b) perpendicular to the line ℓ_0