PROBLEM SET 0.
PRELIMINARY MATH EXERCISES
ECON 101

(1) Let $f(x) = 5 - 2x$ and $g(x) = 1 + \frac{x}{4}$
   (a) At what value of x does $f(x)$ equal 0?
   (b) At what value of x does $g(x)$ equal 11?
   (c) Draw a diagram depicting the graphs of these functions over the interval of x between 0 and 3. Be sure to label the graphs "f" and "g". Also label all intercepts.
   (d) What is the slope of the f graph? of the g graph?
   (e) Characterize the intersection of $f(x)$ and $g(x)$ (if there is an intersection). At what value of x do they intersect? What are the values of f and g at the intersection?
   (f) Suppose that f were instead a function of two variables:

$$f(x, y) = 5 - 2x + 2y$$

   Add a note to your label of the f function so that it looks like this $f(x|y = 0)$ (or something conveying the same idea). Now draw in the same diagram the graph of $f(x|y = 1)$. How did the intersection of f and g change?

(2) Problem 15, Parkin Chapter 1, Math Appendix.