Name:

Math 208, Section 3

Quiz number 1

Show all work. How you get your answer is just as important, if not more important, than the answer itself. If you think it, write it!

1. For the function

$$z = f(x, y) = x - 2y^2$$

sketch the **level curves** for the values $z = -1$, $z = 0$, and $z = 1$, on the grid below. Be sure to label everything that you feel needs labelling. (Hint: thinking of x as a function of y might be easier than the other way around...)

What do the various **vertical** cross-sections look like? (I.e., what kinds of curves are they?)