Quiz 2

Show all the work.

1) Find a point $D(x,y)$ such that the points $A(-3,1)$, $B(4,0)$, $C(0,-3)$, and D are corners of a square.

2) Sketch the graph of $y = x^2 - 2x - 8$ by finding the x, y-intercepts, (if any), create a table of sample points, plot them, and test for symmetry.

3) Determine whether or not in the equation $x^3 + y^3 = 4$ y can be written as a function of x?

4) Find the domain of $f(x) = \dfrac{\sqrt{7-x}}{x^2-1}$.

5) Given $f(x) = 3x^2 + x$, Simplify $\dfrac{f(x+h) - f(x)}{h}$