Math 220-04 _____

Write up and hand in Friday.

SHOW ALL YOUR WORK. WORK INDEPENDENTLY. You may use your notes and text.

For $f(x) = \frac{1}{x^2+1}$, find $\lim_{h\to 0} \frac{f(a+h)-f(a)}{h}$ at the following values of a:

$a = -1$:

$a = 0$:

$a = 1$:

Hint: Your answer to the first and the third values of *a* should differ by the sign only.

Your answer to the second should be obvious from the graph seen in class. Sketch *f*(*x*) below: