KF

Math 101 (162)
Quiz 1 (2.1-2.5)

Name: ID #: Section: 18 Serial:

1. Consider the point $P(-1,1)$ on the graph of $y = x^2$. Find the slope m_{PQ} of the secant line PQ for any point Q on the graph. Use m_{PQ} to find the slope of the tangent line a P.

2. Evaluate the limit, if it exists. If the limit does not exist, explain why.
$$\lim_{x\to -1} \frac{1-|x|}{1+x}.$$

3. Let $f(x) = \sqrt{x}$. Find the largest δ such that $|x-4| < \delta \Longrightarrow |f(x)-2| < 1/2$

4. For what values of the constant c the function f is continuous everywhere?
$$f(x) = \begin{cases} 2\cos x & \text{if} \quad x > 0 \\ c - x & \text{if} \quad x \leq 0 \end{cases}$$