## King Fahd University of Petroleum and Minerals Department of Math & Stat Math 101, Section 22 (091) Quiz 3

Name:		
ID #:	(Show Your Work)	

1. Find an equation of the tangent line to the curve  $y = \frac{1}{\sin x + \cos x}$  at the point (0,1).

2. Find 
$$f'(x)$$
 for  $f(x) = \sqrt{\frac{x-1}{x+1}}$ . (4 4oints)

- 3.  $\lim_{x\to 0} \frac{\cos x 1}{\sin x}$  is equal to: (1 point)
  - (a) -1
  - (b) 1
  - (c) 0
  - (d)  $+\infty$
  - (e)  $\pi$

- 4. If  $g(x) + x \sin(g(x)) = x^2$  and g(1) = 0 where g(x) is a differentiable function, then the value of g'(1) is equal to (1 point)
  - (a) 1
  - (b) -1
  - (c) 2
  - (d) -2
  - $(e) \quad 0$