
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 $(0, 1)$. (4 points)

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

3. $\lim_{x \rightarrow 0} \frac{\cos x - 1}{\sin x}$ is equal to: (1 point)

- (a) -1
- (b) 1
- (c) 0
- (d) $+\infty$
- (e) π

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) 0