King Fahd University of Petroleum and Minerals
Department of Mathematics and Statistics
Math 101 (132) - Quiz 1

Name: ID: Serial No.:

1. Find $\lim_{x\to\infty} \dfrac{1+\cos x}{x}$

2. Evaluate the limit or show that it does not exist.

$$\lim_{x\to 1^-} \frac{|x-1|}{2x^2-3x+1}$$

3. Find the average rate of change of the function $g(t) = 2 + \sin(t)$ over the interval $[-\pi/2, \pi/2]$.

4. Evaluate the limit or show that it does not exist.

$$\lim_{x \to -2} \frac{x+2}{\sqrt{x^2+5}-3}$$

5. Use limits to find the equation of the tangent line to the graph of $f(x) = x - \dfrac{1}{x}$ at $x = 3$.