Pledge:

2/10/2009 MATH261 Calculus I Name:_____
Dr. Lunsford Quiz 4 (20 Points Total)

Find the exact value of the following limits (i.e. not a calculator approximation). If the limit does not exist as a real number, please determine if it is possibly infinite. For each limit you must show at least one intermediate step, which can be an explanation in English, for full credit. Clearly indicate your answers. Point credit for each problem is given below the problem.

1. $\lim_{t\to 3^+} \ln\ t^2 - 9$

(3 points)

2. $\lim_{x\to \pi^+} \dfrac{x-4}{\sin x}$

(3 points)

3. $\lim_{x\to 1^+} \sqrt{1-x^2}$

(3 points)

4 $\lim_{x\to \pi} \sin(x+\sin x)$

(3 points)

5. $\lim_{w\to 2} \tan^{-1}\left(\dfrac{w^2-4}{4w-2w^2}\right)$

(4 points)

6. $\lim_{x\to -\infty} e^x \cos x$

(4 points)

Hint for #6: What is that cute little theorem you love to hug?