232 Quiz 3
September 16, 2011

Section: _____ **Name:** * key * V1

Work individually. You may use your Notebooks. No technology or other material allowed.

1. What is the initial form of each of the following limits?
(Circle one answer per line. DO NOT SOLVE THE LIMITS.)

$\lim_{x\to 0^+} \frac{1-\ln x}{x^2}$	$\frac{0}{0}$	$\frac{\infty}{0}$	$\frac{0}{\infty}$	$\frac{\infty}{\infty}$
$\lim_{x\to\infty} e^{-x}\ln x$	$0\cdot 0$	$0\cdot\infty$	$\infty\cdot 0$	$\infty\cdot\infty$
$\lim_{x\to 1} (\ln x)^{x^2-1}$	0^0	0^∞	∞^0	∞^∞

2. For each limit form below, determine whether the form is indeterminate, or whether it always approaches 0, 1, or ∞. (Circle one answer per line.)

$\frac{\infty-\infty}{3}$	must approach 0	must approach 1	must approach ∞	indeterminate
0^0	must approach 0	must approach 1	must approach ∞	indeterminate
$0^{-\infty}$	must approach 0	must approach 1	must approach ∞	indeterminate

3. Determine whether each of the following trigonometric values is positive, negative, zero, or undefined. (Circle one answer per line.)

$\tan(-\frac{3\pi}{8})$	positive	negative	zero	undefined
$\csc 0$	positive	negative	zero	undefined
$\cos\frac{17\pi}{5}$	positive	negative	zero	undefined

4. Fill in the blanks to complete the definition:

Given any angle θ, the number $\sin\theta$ is the y-coord *of the point where the* terminal *edge of θ meets the* unit circle.