

232 Quiz 3

September 16, 2011.

Section: _____

Name: *key* v2

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.)

~~10~~ $\lim_{x \rightarrow \infty} e^{-x} \ln x$ ~~10~~ $\infty \cdot \infty$ $\infty \cdot 0$ $0 \cdot \infty$ $0 \cdot 0$

~~10~~ $\lim_{x \rightarrow 1} (\ln x)^{x^2-1}$ $\infty \cdot \infty$ ∞^0 0^∞ 0^0

~~10~~ $\lim_{x \rightarrow 0^+} \frac{1 - \ln x}{x^2}$ $\frac{\infty}{\infty}$ $\frac{0}{\infty}$ $\frac{\infty}{0}$ $\frac{0}{0}$

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

0^0 must approach 1 must approach 0 must approach ∞ indeterminate

$\infty \leftarrow \frac{1}{0} = \frac{1}{0^0} =$

0^∞ must approach 1 must approach 0 must approach ∞ indeterminate

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

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

~~10~~ $\frac{1}{\sin 0} = \csc 0$ zero positive negative undefined

$\cos \frac{17\pi}{5}$ zero positive negative undefined

$\frac{17\pi}{5} = \frac{10\pi}{5} + \frac{5\pi}{5} + \frac{2\pi}{5}$

~~10~~ $\tan(-\frac{3\pi}{8})$ zero positive negative undefined



4. Fill in the blanks to complete the definition:

Given any angle θ , the number $\cos \theta$ is the x-coord of the point

where the terminal edge of θ meets the unit circle