

# 232 TEST 2

*You may use your notebook during this exam.  
You may NOT use calculators, cell phones, or peeking.*

Math 232  
March 20, 2009

**Name:** \_\_\_\_\_  
By printing my name I pledge to uphold the honor code.

1. Calculate each of the following. Show your work.

a)  $\sum_{k=1}^{100} \frac{k^2 - 1}{4}$

b)  $\sec^{-1}(-2)$

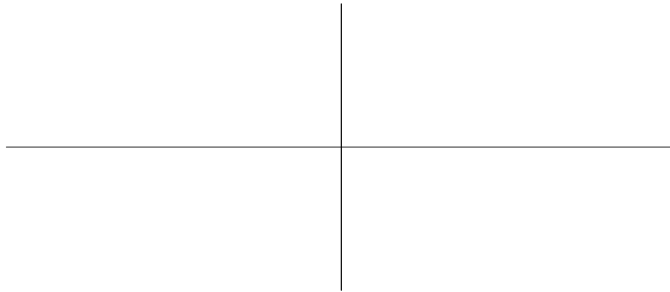
c)  $\frac{d}{dx} (\ln(\sin^2 x))$

d)  $\lim_{x \rightarrow 0} \frac{\tan x \cos x}{x^2 \csc x}$

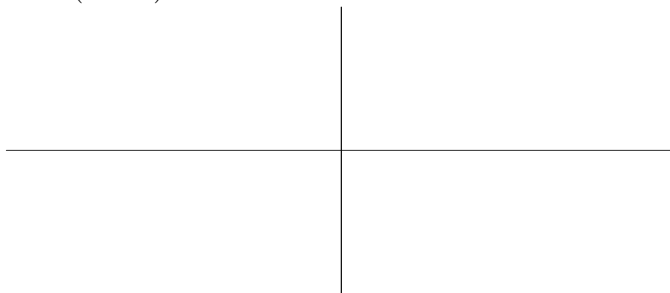
2. Write  $\sin(\cos^{-1} x)$  as an algebraic function. Show your work.

3. Sketch graphs of each of the following functions, without using any derivative information. Label your axes carefully.

a)  $f(x) = \sec\left(\frac{1}{2}x\right)$



b)  $f(x) = 3 \cos(x - \pi) + 1$



c)  $f(x) = e^x \sin x$

