

Math 150A, Section 2, Spring 2007  
Quiz 3

**Name:**

Show your work. No work, no credit.

1. Find the limit  $\lim_{\theta \rightarrow 0} \frac{\cos \theta - 1}{\sin \theta}$ .

2. A particle moves according to the law of motion  $s(t) = t^3 - 12t^2 + 36t$ , where  $t \geq 0$  is measured in seconds and  $s$  in feet. When is the particle at rest?

3. Give the derivatives of the functions  $\sec$  and  $\tan$ . Then find the derivative of the function  $f(x) = \sec x \tan x$ .

4. Find the derivative of the function  $f(x) = \sqrt[7]{(x^2 - 5)^6}$ .

Pledged

Honor code: I have neither given nor received help on this quiz.