MATH 151
Mrs. Bonny Tighe

QUIZ 8A
25 points
4,10

NAME _____

Section _____ 4/14/06

1. Find f given the following. a) $f'(x) = \sin x - \cos x - \csc^2 x,\ f(0) = 1$

b) $f''(x) = \dfrac{4x^4 - 3x}{x},\ f'(1) = 3$ *and* $f(0) = 1$

c) $f''(x) = 4\sqrt{x}(1 + \dfrac{1}{x^4}),\ f(1) = 0$ *and* $f(4) = 1$

2. Use a direction field to graph the antiderivative F that satisfies F(0) =1 given $f(x) = \sqrt{x} - x$

3. A particle is moving with acceleration of $a(t) = \sin t + \cos t$ Find the equation for the position function of the particle if $v(0) = 1$ *and* $s(0) = 2$.

4. A rock is dropped off the top of a tower and hits the ground at -128 ft/sec. If acceleration due to gravity is -32 ft/sec/sec, find how tall the tower is.

5. What constant acceleration is required to increase the speed of a car from 0 mi/h to 50 mi/h is 10 seconds?