

MATH 151
Mrs. Bonny Tighe

QUIZ 8
25 points
4,10

NAME _____

Section _____ 4/14/06

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

b) $f''(x) = \frac{6x^3 - 2x}{x}$, $f'(1) = 3$ and $f(0) = 1$

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

2. 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 $s(0) = 2$.

3. Use a direction field to graph the antiderivative F that satisfies $F(0) = 1$ given

$$f(x) = \sqrt{x} - x$$

4. What constant acceleration is required to increase the speed of a car from 0 mi/h to 60 mi/h in 10 seconds?

5. A rock is dropped off the top of a tower and hits the ground at -160 ft/sec. If acceleration due to gravity is -32 ft/sec/sec, find how tall the tower is.