Math 105a Quiz #5
March 1, 2002

Name: ______________________

1. Find \( \frac{dy}{dx} \) for each of the following.
   a) \( y = \cos(5x \arcsin(3x)) \)
   b) \( y = \ln(\tan(\sqrt{\log_{10}(3x)})) \)
   c) \( y = (x^{10} + x^2)\sin x \)
   d) \( e^{2y} + 17 = 25\sin y \)

2. One car is 300 feet north of an intersection and heading south at 80 feet per second. Another car is 400 west of the same intersection and heading west at 100 feet per second. At what rate is the distance between the two cars changing? Is this distance growing or decreasing?