MAT 263/263A

Related Rates

*Directions:*

1. Carefully read through the problem below and list your given information.
2. Identify the unknowns and assign variables.
3. Draw a picture of the problem at hand. Label all given and unknown information.
4. Using implicit differentiation, differentiate.
5. Substitute your known values and solve for your unknown.
6. Check your solution, does it appear reasonable?

A balloon is 100 ft off the ground and rises vertically at a constant rate of 10 ft/sec. Directly beneath the balloon is a bicycle, which travels at a constant rate of 20 ft/sec. How fast is the distance between them changing two seconds later?