Math Xb Spring 2004
Handout: Related Rates Strategy
February 18, 2004

1. Read the problem and make sure you understand the situation. Drawing a picture often helps.
2. Identify the variables – those quantities that change over time. Given them names (x, y, h, A, etc.) and label them in your drawing.
3. List the rates ($\frac{dx}{dt}$, $\frac{dy}{dt}$, $\frac{dh}{dt}$, $\frac{dA}{dt}$, etc.) that you know and identify the rate that you want to find.
4. Also list any instantaneous information – the values of your variables at the instant you are interested in.
5. Find an equation that relates the variables. Usually some geometry is required – Pythagorean Theorem, similar triangles, volume or area formulas, etc.
6. Differentiate this equation with respect to time to get an equation that relates the rates. Remember the Chain Rule!
7. Use what you know (the rates found in Step 3 and the instantaneous information found in Step 4) to solve for the rate you want to find.
8. Reread the problem and make sure you are answering the question asked.