**Steps for solving a Related Rates Problem**

1. Read the problem CAREFULLY.
2. Draw a picture and label it.
   1. Label things that NEVER CHANGE as numbers.
   2. Label anything that changes as a variable.
3. What rate(s) do you know? What rate are you trying to find?
   1. What are the distances (measurements) that are changing at that speed?
   2. Make sure these have variable names.
4. Find a relationship between the variables in step 3b. Write an equation for that relationship. This is your related values equation.
5. Eliminate variables from the equation for which you do not know the rate of change (except for the variable whose rate of change you're looking for).
6. Take the derivative implicitly with respect to t (time). This is your related rates equation.
7. Plug in values that never change.
8. Plug in "particular moment" information. DO NOT USE THIS INFORMATION UNTIL THIS STEP.
9. Solve for the rate which you are trying to find.