

Procedure for Solving Related Rates Problems

- 1) Draw a picture (if one is not provided) and define the variables. Assign ALL numbers to variables. Remember, rates ALWAYS correspond to a derivative.
- 2) Determine and CLEARLY STATE goal of the problem, which is ALWAYS finding a rate/derivative.
- 3) Build your related rates equation. Usually, this involves the implicit differentiation of a equation from geometry. Note: If there's only ONE rate/derivative in your related rates equation, you did something wrong!
- 4) Isolate the goal rate in 2) and make sure you have the numbers for all the other variables and rates/derivatives. If not, you have to find the missing numbers, usually by solving another equation.
- 5) Plug in numbers and solve, making sure to INCLUDE UNITS. Think about the solution and its plausibility!