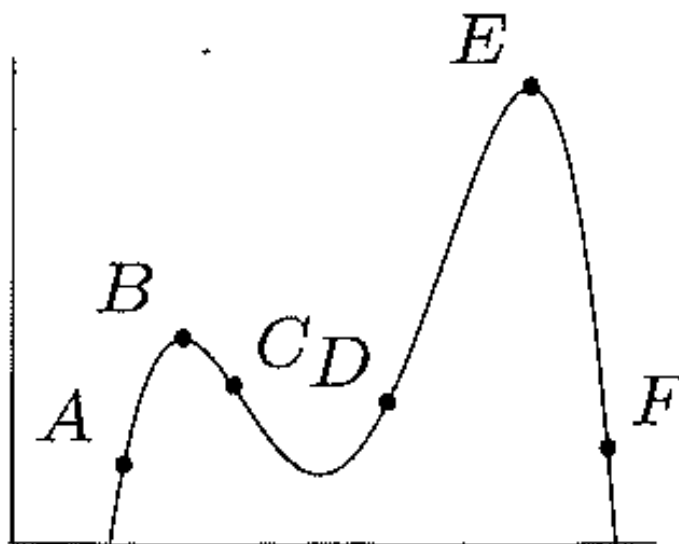


WEEKLY 2
APPLIED CALCULUS
DUE 09-05

Show your work!

- (1) (a) Set up the limit that gives the instantaneous rate of change of $f(x) = 1/x$ at $x = 3$.
(b) Evaluate the limit analytically. (You **may not** use a derivative rule, even if you know it.)
- (2) On the figure below, or a photocopy of it, sketch the tangent line at each of the labelled points. (You may wish to use several copies, to keep the picture from getting too crowded.)
At which labelled point(s) on the graph below is the slope positive? ...negative? At which labelled point is the slope *most* positive? ...*most* negative? Explain your answers.



- **Three** book problems: #11.1.52; #11.3.25, 29.