1. Let p be the price (in dollars) of 1 lb. of delicious cheese. Let $Q(p)$ be the number of pounds of delicious cheese that I'll buy if the price is $\$p$.
(a) In words, what does the equation $Q(2) = 10$ mean?
(b) Do you expect $Q'(2)$ to be positive or negative? Why?
(c) If $Q(2) = 10$ and $Q'(2) = -3$, roughly how much delicious cheese would I buy if the price p went up to $\$2.10$?
(d) In words, what is $Q'(2)$ telling you?

2. Let $f(x) = \dfrac{1}{x}$ and $g(x) = \dfrac{1}{x} + 10$.
(a) Use your calculator to estimate $f'(3)$.
(b) Compute $f'(3)$ using the definition of derivative.
(c) Use your calculator to estimate $g'(3)$.
(d) Compute $g'(3)$ using the definition of derivative.
(e) Compare your results for f and g. Explain what happened. (A picture may be helpful.) Can you generalize?