1.) Give an $\epsilon/\delta$-proof for each limit.
   a.) $\lim_{x \to -1} (x^2 - x) = 2$  
   b.) $\lim_{x \to 0} \frac{x + 6}{2 - x} = 3$  
   c.) $\lim_{x \to 4} (x + \sqrt{x}) = 6$

2.) Use $\lim_{h \to 0} \frac{f(x + h) - f(x)}{h}$ to differentiate each function.
   a.) $f(x) = x^3 - x$
   b.) $f(x) = \frac{\sqrt{x}}{2 + \sqrt{x}}$
   c.) $f(x) = x + \sin(5x)$

3.) Find all points $(x, y)$ on the graph of $y = x^2 + 3x$ with tangent lines passing through the point $(1, 0)$.

4.) Find an equation for each line tangent (simultaneously) to both of the graphs $y = x^2$ and $y = \frac{8}{x}$.

5.) A pyramid with a square base of area 16 square feet has height 5 feet. What is the radius of the largest sphere which can fit completely inside the outer surface of the pyramid?