6 pts (I) $\lim_{x \to 4} \frac{\sqrt{x+5} - 3}{x - 4}$ must show steps

4 pts (J) $\lim_{x \to \frac{\pi}{2}^+} \tan x$

4 pts (K) $\lim_{x \to 5} \frac{5 - x}{x^2 - 25}$

5 pts 3. Use the Squeeze Theorem to find a limit. Clearly show the use of limit notation.
Find the limit of $4 - x^2 \leq f(x) \leq 4 + x^2$ as x approaches 0.

5 pts 4. Use the Intermediate Value Theorem to show that $f(x) = x^2 + x - 1$ on the interval $[0, 5]$ has an $f(c) = 11$.

12 pts 5. Given $f(x) = 3x^2 - x + 5$ find

(a) The derivative by the limit process

$$f'(x) = \lim_{h \to 0} \frac{f(x+h) - f(x)}{h}$$

(b) Find the tangent line at $(1, 7)$