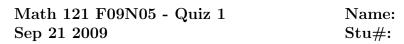**(1) [5 points]**   Let $f(x) = 3x - x^2$. Evaluate and simplify the difference quotient $\dfrac{f(3+h) - f(3)}{h}$.

(2) [5 points]   Express the area A of an equilateral triangle as a function of a side x .

(3) [5 points]   Neatly sketch the graph of $y = 1 + 2\cos(x)$ by starting with the graph of $y = \cos(x)$ and applying transformations. Make sure you label and indicate the scale on the axes.