9. (6 points)

(a) Write the limit definition of \( g'(2) \) for an arbitrary differentiable function \( g \).

\[ g'(2) = \lim_{h \to 0} \frac{g(2 + h) - g(2)}{h}. \]

(b) Use limit and summation notation to define \( \int_a^b h(x) \, dx \) for an arbitrary continuous function \( h \).

\[ \int_a^b h(x) \, dx = \lim_{n \to \infty} \left( \sum_{i=0}^{n-1} h(x_i) \Delta x \right) = \lim_{n \to \infty} \left( \sum_{i=1}^n h(x_i) \Delta x \right). \]

[Note: either the LHS or the RHS could be used here. Both are not necessary.]