

Name:

Student ID:

Q1) Evaluate $\left. \frac{dw}{dx} \right|_{x=1}$ if $W(x) = \left(\int_0^x \left(t^{\frac{1}{2}} + t^3 \right) dt \right)^2$



Q2) Evaluate the limit $\lim_{\|P\| \rightarrow 0} \sum_{k=1}^n (\sqrt{c_k} + \sin(c_k)) \Delta x_k$, where P is a partition of $[0, \pi]$.