ID#_____ Name:_____ **Quiz 1** MATH 102-T172 Serial#_____

Q1. Evaluate the integral $\int_0^3 \left(|x-1| - \sqrt{9-x^2} \right) dx$ by interpreting it in terms of area.

Q2. Find the values of the smallest m and largest M so that $4m \le \int_1^4 (x - \frac{x^3}{3}) dx \le 4M$.

(For solution, use other side of the paper)

ID#_____ Name:_____ **Quiz 1** MATH 102-T172 Serial#_____

Q1. $15+\int_3^{2x}(\cos t)\,f(t)dt = x^2,$ find $f'(\frac{\pi}{8})$. [Hint: First find $f(t)$]

Q2. Find the nth Riemann sum of $f(x)=5-x,\ x\in[0,2]$ using the Left end rule, and simplify your answer.

(For solution, use other side of the paper)

ID#_____ Name:_____ **Quiz 1** MATH 102-T172 Serial#_____

Q1. Find $g'(2)$ when $g(x) = \int_{x^2}^{4x^2} \sin(\pi\sqrt{t})dt$

Q2. Express the $\lim_{n\to\infty} \sum_{k=1}^{n} \frac{\pi}{15n} \sin\left(\frac{\pi}{3} + \frac{4k\pi}{n}\right)$ as a Definite integral.

(For solution, use other side of the paper)