KFUPM

MATH 102 QUIZ #1 Sec. 17 **Time: 15min**

Name: ID:

Q1. Write the following limit as a definite integral (Do not evaluate it):

$$\lim_{\|P\|\to 0}\sum_{k=1}^{n}(1+c_k)^3\Delta x_k$$

where P is a partition of $[2,3]$.

Q2. Find the derivative dy/dx, if y is given by

$$y = x\int_1^{\sin x}\ln t dt.$$

Q3. Evaluate the integral

$$\int \frac{x^2}{(x^3+1)^2} dx$$