Quiz #4 Math 1131 11/21/2014

Name: _____ Section: _____

You have 10 minutes to complete the quiz. Please **show all work**, and then **circle your answer.**

1. Compute $\sum_{j=2}^{4} (j^2+1)$

$= (2^2+1) + (3^2+1) + (4^2+1)$

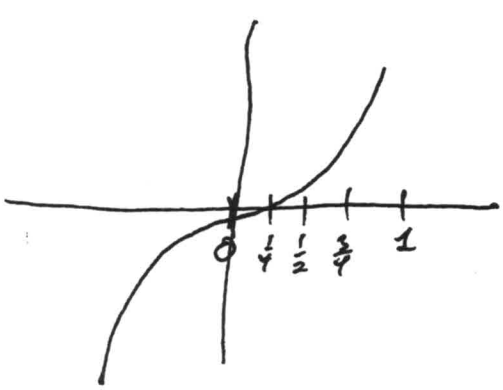
$j=2 \quad j=3 \quad j=4$

$= 5 + 10 + 17$

$= 32$

Sum

2. Use a right with four rectangles to express the area under $f(x) = x^3$ between 0 and 1.



$R_4 = f(\frac{1}{4})\cdot\Delta x + f(\frac{1}{2})\cdot\Delta x + f(\frac{3}{4})\cdot\Delta x + f(1)\cdot\Delta x$

$= (\frac{1}{4})^3\cdot\frac{1}{4} + (\frac{1}{2})^3\cdot\frac{1}{4} + (\frac{3}{4})^3\cdot\frac{1}{4} + (1)^3\cdot\frac{1}{4}$

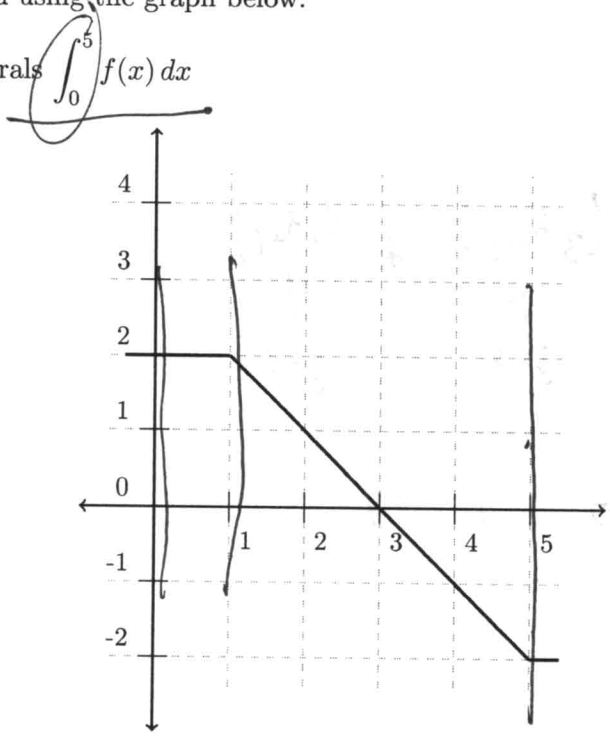
CONTINUED ON BACK

7:20

Name: _____ Section: _____

3. Let $f(x)$ be defined using the graph below.

Compute the integrals $\int_0^5 f(x)\,dx$



$$\int_0^5 f(x)\,dx = 1\cdot 2 + \frac{1}{2}\cdot 2\cdot 2 - \frac{1}{2}\cdot 2\cdot 2$$

$$= 2 + 2 - 2$$

$$= 2$$