

Math 152

January 18, 2011

Quiz #2 B

Name _____

please print

Show your work

Good Luck!

1. State (carefully and completely) Part 2 of the Fundamental Theorem of Calculus.

If

then

(2)

2. (a) An antiderivative of $f(x) = 7x^2 + \frac{5}{x} - 2$ is $F(x) =$ _____

(b) An antiderivative of $f(x) = \cos(2x + 1) + \sqrt{x}$ is $F(x) =$ _____

(2)(2)

3. Evaluate (show work. 2 decimal places)

$$\int_0^2 6x^2 + 5 \, dx = \underline{\hspace{2cm}}$$

(3)

$$\int_0^1 12x^3 + e^x \, dx = \underline{\hspace{2cm}}$$

(3)

4. The figure shows the

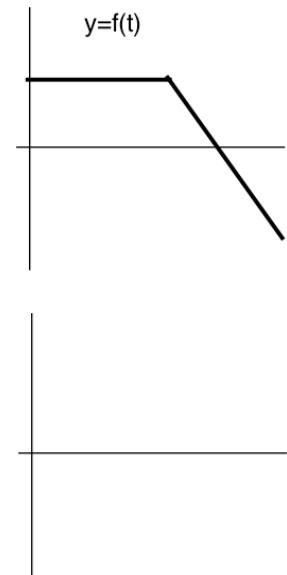
graph of $y=f(t)$

(2)

Carefully sketch

the graph of

$$y = A(x) = \int_0^x f(t) \, dt$$



5. You begin at the origin of the number line (x-axis) at time $t=0$, and our velocity along the x-axis at

time t minutes is $v(t) = 4t - t^2$ feet/minute.

(3) (a) From time $t=0$ to $t=5$ minutes, what total distance did you walk? _____

(3) (b) What is your location on the x-axis when $t=5$? _____

6. (a) How old was Newton when he discovered calculus (+/- 2 years)? _____

(1)(1) (b) What was Leibniz' main profession/job? _____