Name: _____ **PID:** _____

TA: _____ **Sec. No:** _____ **Sec. Time:** _____

Math 10B.
Midterm Exam 2
February 26, 2007

Turn off and put away your cell phone.
You may use any type of calculator, but no other electronic devices during this exam.
You may use one page of notes, but no books or other assistance during this exam.
Read each question carefully, and answer each question completely.
Show all of your work; no credit will be given for unsupported answers.
Write your solutions clearly and legibly; no credit will be given for illegible solutions.
If any question is not clear, ask for clarification.

#	Points	Score
1	10	
2	8	
3	4	
4	4	
Σ	26	

1. (a) (3 points) Find $LEFT(2)$ and $RIGHT(2)$ for $\int_0^4 (x^2+1)\,dx$.

(b) (2 points) For each approximation: is it an underestimate or overestimate? Explain your answers.

(c) (3 points) Find $MID(2)$ and $TRAP(2)$ for $\int_0^4 (x^2+1)\,dx$.

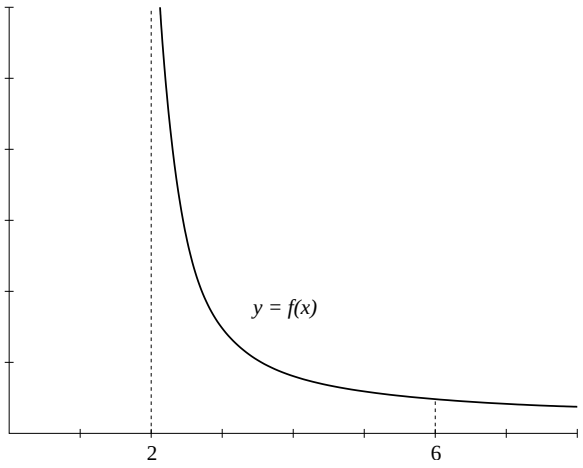
(d) (2 points) For each approximation: is it an underestimate or overestimate? Explain your answers.

2. (8 points) Evaluate the following indefinite integrals.

(a) $\int x^3 \ln(x)\, dx$

(b) $\int \frac{x+4}{x^2-2x}\, dx$

3. (4 points) Let $f(x) = \dfrac{1}{\sqrt{x-2}}$. Is the area under the graph $y = f(x)$ and between $x = 2$ and $x = 6$ finite? If so, compute its value; if not, explain why it is not.



4. (4 points) The velocity of a car after t hours is given by $v(t) = \dfrac{50t}{\sqrt{t^2+9}}$ miles per hour. Compute how many miles the car travels in the first 4 hours.