

Answer the following questions. Display your answers clearly and neatly. Explain your reasoning. Use complete sentences.

1. Stewart, page 373 #2a)b)c).
2. Consider the integral  $\int_a^b \sin(x) dx$  as  $a$  and  $b$  vary. What is the largest possible value for this integral? Write a sentence or two to explain why you think your answer is correct.
3. Find all functions which satisfy

$$\int_0^x f(t) dt = 2f(x)^2.$$

Hint: Differentiate both sides of this equation. What can you say about  $f'$ ?

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TUTORING AND REVIEW SESSIONS

Monday, 17 April 2006 6–9pm	Tutoring	Young Library B25
Monday, 24 April 2006 6–9pm	Tutoring	Young Library B25
Sunday, 30 April 2006 6–8pm	Review session	CB102

April 12, 2006