

Test #4 will be given on Tuesday May 5<sup>th</sup>. It will include materials from Sections 5.1, 5.2, 5.3, 6.1, 6.2, 7.1 and 7.2 Plus 25 Points from your Test III materials.

### **IMPORTANT REMINDERS**

**MAKEUP POLICY:** If you know in advance that you have to miss a quiz or test, you can make arrangements with me to take the quiz or test **before** it is given in class. Otherwise, no makeup quizzes will be given. If you miss an hour test, it may be made up only if you

- Do not have more than one unexcused absence during the time period covered on the test.
- Contact me on or before the scheduled test date.
- Can prove that you have a legitimate excuse.
- Show me all homework on the relevant material.

**If you do not meet these conditions, you will not be permitted to take a makeup test and the percentage equivalent of your final exam grade will be substituted for the grade of the missed test. No student will be permitted to take more than one makeup test.**

**ACADEMIC HONESTY:** All students are expected to do their own work on quizzes and tests. Students are expected to observe the following rules during any test or quiz.

- Students may not use or even hold a cell phone or any other electronic device.
- Students may not speak to or share materials with other students.
- Students should have all materials ready at the beginning of the quiz or test.
- Students should remain in the room during the entire test or quiz.

Appropriate penalties will be imposed for breaches of academic honesty.

**If you have documentation showing that you require extended time for tests, you must discuss this with me at least two days before the scheduled test date.**

**To be prepared for this test, you should be able to**

- Differentiate exponential and logarithmic functions.
- Find functions that satisfy  $P'(t) = kP(t)$  or  $P'(t) = -\lambda P(t)$
- Solve applications involving exponential growth, exponential decay, and continuous compound interest.
- Find indefinite integrals and antiderivatives.
- Solve applied problems involving antiderivatives.
- Use a Riemann sum to estimate the area under a curve.
- Interpret the area under a curve in applications.

OVER →

## TO PREPARE FOR THIS TEST,

- \* Make sure that you can do all homework and worksheet problems.
- \* Read your textbook and go over your notes.
- \* Make sure you know all the important formulas and properties.
- \* Do the following supplementary exercises and additional review problems.

### Suggested Supplementary Exercises

Review the Final Review Packet (Questions 14 – 30)

Chapter 4 (p.277) #19 – 25 odd, 51 and 53

Chapter 5 (p.329 and 330) #1 – 33 odd

Chapter 6 (p.378) #1 – 13 odd

Chapter 7 (p.420) #1, 3, 4, 7, and 8

### Additional Review Problems:

- 1) Find the antiderivative of each function. Write answers with no negative exponents.

(a) $f(x) = 12x^3 - 8x + \frac{5}{x}$	(b) $f(x) = 12\sqrt{x}$
(c) $f(x) = \frac{12}{x^2}$	(d) $f(x) = \frac{12}{\sqrt{x}}$
(e) $f(x) = \frac{5x^4 - 7x^3 + 3x^2 - 4x}{x^3}$	(f) $f(x) = 2 + 3e^{7x} - x$
(g) $f(x) = 5x^4 + \frac{5}{x^4} + \frac{x^4}{5} + 5\sqrt[4]{x}$	(h) $f(x) = (3x + 2)(x - 5)$

- 2) Find the function  $f(x)$  such that  $f'(x) = \frac{3}{5x}$  and  $f(e) = 10$ .

- 3) In this problem, you are going to find the area of the region between the graphs of the functions  $y = 16 - x^2$  and  $y = x + 16$ . To solve this problem,

Please do your HW, and get help during office hours, or come to Math Club on Friday from 3 to 5 PM in SC462, or go to the **Math/Science Center**.