

Test #2 will be given on Wednesday, October 15. It will include material from Sections 5.8, 5.9, 4.5, 5.10, 6.1, and 6.2.

MAKEUP POLICY REMINDER:

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

1. Contact me on or before the scheduled test date. My office telephone number is 301-279-5215. If I am not there, leave a message. Be sure to state your telephone number clearly and tell me when I can reach you.
2. Can prove that you have a legitimate excuse.
3. 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.

Topics for Test

- Use an integral table to evaluate integrals. (Any necessary integral tables will be provided.)
- Approximate the value of a definite integral using the left, right, midpoint, trapezoidal or Simpson's Rule if a function is given graphically, numerically or by a formula. You should have the program NUMINT on your calculator.
- Determine the accuracy of an approximation using the error bound formulas for the midpoint or trapezoidal rule. (You do not have to memorize these formulas.)
- Use the shape of a function to determine the relative size of the error using the left, right, midpoint or trapezoidal rule.
- Use L'Hospital's Rule to evaluate limits involving indeterminate forms.
- Evaluate improper integrals.
- Use integration to determine the area between curves; recognize when it is more appropriate to use a vertical or a horizontal element of area.
- Understand the general volume formula $V = \int_a^b A(x) dx$; apply this formula to various types of solids such as solids of revolution and solids with known cross-sections.

Suggested Review Problems

Chapter 4 Concept Check p. 336/ 7

Chapter 4 True-False p. 337/13

Chapter 4 Exercises p. 337/ 25, 26, 28, 29, 32

Chapter 5 Concept Check p. 438/ 9, 10, 11

Chapter 5 True-False p. 439/12

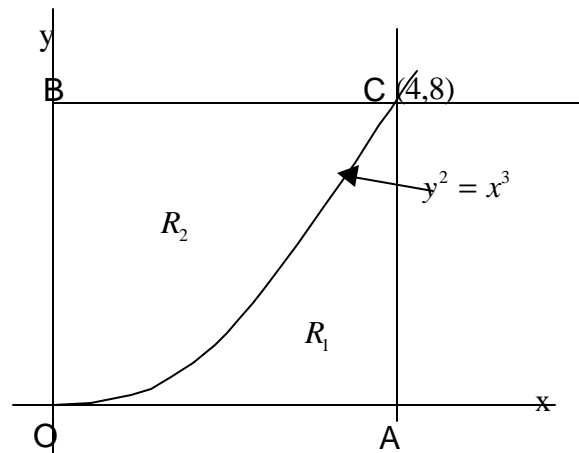
Chapter 5 Exercises p. 440/ 43, 44, 45, 47, 49, 50, 55 - 60, 64

Chapter 6 Concept Check p. 499/ 1, 3

Chapter 6 Exercises p. 500/ 1, 2, 4, 5, 6, 7, 11, 12 (See other side for more review problems)

In the figure to the right, the curve is $y^2 = x^3$.

R_1 is region OAC, and R_2 is region OBC.



1. Find the area of R_1 .

2. Find the area of R_2 .

3. Set up the integral which represents the volume of the solid of revolution generated if the given region is revolved about the given axis of revolution.

	Region	Axis of revolution
(a)	R_1	x-axis
(b)	R_1	AC
(c)	R_1	BC
(d)	R_1	y-axis
(e)	R_2	y-axis
(f)	R_2	BC
(g)	R_2	AC
(h)	R_2	x-axis

4. Suppose the region R_1 is the base of a solid in which cross-sections of the solid are squares perpendicular to the base and parallel to the y-axis. Set up an integral which represents the volume of this solid.

5. Suppose the region R_2 is the base of a solid in which cross-sections of the solid are semi-circles perpendicular to the base and parallel to the y-axis. Set up an integral which represents the volume of this solid.