

REVIEW 7 – Applications of Integration

Summary of Topics for Sections 7.1c to 7.2, 7.4a and 7.5:

Gini Index
Building an integral
Volume of a solid of known cross section
Volume of a solid of revolution – disk method
Arc Length
Work - liquids and chains
Fluid Force

Suggested Review Problems from the Textbook

Pg. 515-516 Review Exercises: 21, 25, 27, 29, 31, 32, 33, 41, 43, 45, 53

Additional Suggested Review Problems

1. Use methods of integration to find the volume of the solid whose base is a square and whose cross sections perpendicular to the base form semicircles of diameter 3.
2. A region is bounded by the curves $y = \sqrt{x}$, $y = 0$, and $y = -x + 2$. Find the VOLUME formed by revolving the region about the x -axis

Answers

Suggested Review Problems from the Textbook

Pg. 515-516 Review Exercises
32. 1.630

Additional Suggested Review Problems

1. $\frac{1}{2} \int_{-1.5}^{1.5} \pi(1.5)^2 dx = 10.603$
2. $\int_0^1 \pi x dx + \int_1^2 \pi(-x+2)^2 dx = \frac{5\pi}{6}$