

MATH 158 Assignment 2, Spring 2011

Michael Monagan

Due Monday February 7th at 5:20 pm.

NB: the first midterm starts at 5:30pm!

Section 8.6 Area Between Two Curves

Exercises 2, 3, 6, 41, 42, 53, 56.

Section 9.1 Integration by Parts

Exercises 2, 13, 14, 30, 38, 56, 60.

For exercise 60, the current yearly production rate is 20 million tons per year and they want to increase it by $2te^{-0.05t}$ tons per year. The way I read this is that the production rate will become $20 + 2te^{-0.05t}$ million tons per year. To calculate $\int 20 + 2te^{-0.05t} dt$ use formula 24 from the table of integrals in Section 9.3 if you wish. You should get 611.4 million tons of coal for the total amount of coal produced over the next 20 years.

Section 9.4 Numerical Integration

Exercises 8, 39.

Section 9.5 Improper Integrals

Exercises 1, 10, 20, 31, 32.

Section 8.5 Average of a Function

Exercises 45, 48, 49.

Section 8.7 Lorenz Curves and the Gini Index

Exercise 24.

Using google, I found that Mexico's Gini index was 0.46 in 2004. If we assume Mexico's Lorenz curve is x^a for some a , find a .