

Second Homework Assignment for Math 308

Due: Thursday, January 31st.

All section references are to the Strayer text.

Problems to hand in:

Chapter 2 exercises 2, 3, 5 c., d., 9 b.

Show that the set of optimal solutions to a linear program is a convex set.

Solve the following problem using the simplex method:

$$\begin{aligned} &\text{maximize} && 2x_1 + x_2 - x_3 \\ &\text{subject to} && x_1 + 2x_2 \leq x_3 + 5, \\ & && x_1 \leq x_2, \\ & && x_1, x_2, x_3 \geq 0 \end{aligned}$$

Some other problems you should try:

The remaining questions from Chapter 2 are good, I recommend having a look at them. A few of them deal with topics that we may not completely cover before this assignment is due, expect one or two such problems on the next assignment.

Reading for the next two weeks:

For Tuesday, January 22nd, Sections 2.3 and 2.4.

For Thursday, January 24th, Sections 2.5 and 2.6.

For Tuesday, January 29th, Section 2.7.

For Thursday, January 31st, Sections 2.8 and 2.9.

Reminders:

The early drop deadline is Friday, January 18th.

The first midterm is Thursday, February 7th.