Problem Set 4

Math 20

Due March 1, 2006

Reading

Read Sections 11.4 and 11.5 in the Stewart excerpt.

Problems

- 11.4: 2, 4, 14 (no need to give a graph), 20, 22

- 11.5: 4, 6, 10, 12, 28, 29

- Label this exercise A1: A company's monthly sales of a product depend on price p, the amount spent on development x and advertising y in units of $1000, and the total number of working hours of the sales representatives z in units of 100, according to the model:

$$S(p, x, y, z) = (200 - 20p)x^{1/5}y^{1/4}z^{1/2}.$$

If price is decreased by \$1, expenditure on development and advertising is each increased by \$1000 and the number of working hours of the sales representatives is increased by 100, estimate the increase in sales if currently price is \$4, expenditure on development and advertising is \$40,000 and \$50,000 respectively and the sales representatives are employed for a total of 1200 hours.

Division

- Part I: Section 11.4 exercises

- Part II: Section 11.5 exercises and exercise A1