Course MTH110 – Basic Statistics Lecturer dr. Daniel Ševčovič

Homework 7

(Return date: 26.2.2003)

Linear regression analysis

The growth of children follows a straight line patter between early childhood and adolescence. Here are date on Sarah's growth between the ages of 36 months and 60 months.

| Age | 36 | 48 | 51 | 54 | 57 | 60 |
|----------|----|----|----|----|----|----|
| (months) | | | | | | |
| Height | 86 | 90 | 91 | 93 | 94 | 95 |
| (cm) | | | | | | |

- a) Make a linear regression analysis. Compute the slope and intercept. Display scatterplot of the given data set and linear regression line.
- b) Sarah's growth rate is the number of centimeters she grows each month (on the average).Use results from linear regression analysis to find her growth rate.
- c) Use your regression line to estimate Sarah's height at age 42 months.