

Homework 2 of R

Due: 2011/11/07

**# iv at page 20 in the lecture note (Getting Started With R)**

- iv. According to the example 6, you may try to change sigma and observe the power when sample size increases. (T = 50, 100, 200, 300, 500)
- (1) Let  $\Delta = 1$  and  $\sigma = (0.5, 1, 1.5, 2, 3, 4, 5, 6, 7, 10)$ . For each  $\sigma$ , you can evaluate how power changes with different sample size. Draw a power curve like example 6 and explain the result you observe.
  - (2) Please try to change the variance of  $x_2$ . Does this change affect test performances and in what direction? Draw a power curve like example 6 and explain the result you observe.