

Examination Statistics
Course of Study Computer Science
8.2.2007

Name : _____
Matriculation Number : _____

Problems	1	2	3	4	Summe	Note
Maximal scores	10	10	10	10	40	
Obtained scores						

Remarks:

1. Write on every page your name and your matriculation number.
2. Number the problems und the pages.
3. Please notice, not only the solution but the deriviation of the solution has to be given.

Good Luck!

Dr. Falkenberg

1. During a one hour period, an ice cream store had twenty customers, and the purchase amounts were the following:
1.25 2.50 1.25 5.50 3.25 3.25 2.75 6.25 4.00 2.50
1.25 1.25 3.75 6.25 4.75 3.25 1.25 4.75 2.50 1.25
 - (a) On the average, how much did each of the customers consume? What are the median, first and third quartile and mode in the problem?
 - (b) Draw a Box-Plot.
2. Box 1 contains 8 apples and 4 oranges. Box 2 contains 10 apples and 2 oranges. First boxes are chosen with equal probability then subsequently one item out of the box is chosen with equal probability. What is the probability of choosing an apple? If an apple is chosen, what is the probability that it came from box 1?
3. Suppose the number of games in which major league baseball players play during their careers is normally distributed with mean equal to 1500 games and standard deviation equal to 350 games.
 - (a) What percentage of players play in more than 2000 games?
 - (b) What percentage play in fewer than 750 games?
 - (c) Those players which reach the highest 5% of all player's game numbers get on a hall of fame list. What is the lowest number of games a player can play to get on the hall of fame list?
4. A company has certain cables. A test of 20 cables showed a mean breaking strength of 2400 pounds and a standard deviation of 150 pounds.
 - (a) What are the 95% confidence limits for estimating the mean breaking strength of the cables?
 - (b) With what degree of confidence could we say that the mean breaking strength of the 20 cables is 2400 ± 30 pounds?

Assume normally distributed breaking strength!