

Stat 8680: Applied Nonparametric Methods

Assignment 6

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STAT 8680 Applied Nonparametric Methods

Assignment #6

- 1.3 The numbers of rotten oranges (y) in 10 randomly selected boxes from a large consignment are counted after they have been kept in storage for a stated number of days (x). Use the Theil-Kendall method to compute the slope of a straight line fitted to these data and obtain an appropriate estimate of the intercept.

x	3	5	8	11	15	18	20	25	27	30
y	2	4	7	10	17	23	29	45	59	73

Plot these data and the fitted line. Does the fit seem reasonable?

- 1.8 Gat and Nissenbaum (1976) give ammonia concentration (y mg l^{-1}) at various depths (x m) in the Dead Sea. Fit a linear regression for concentration on depth using the Kendall-Theil method and obtain an approximate 95 per cent confidence interval for β .

x	25	50	100	150	155	187	200	237	287	290	300
y	6.13	5.51	6.18	6.70	7.22	7.28	7.22	7.48	7.38	7.38	7.64