

Nonparametric statistics: Practical session V

- One hundred men and 100 women were asked to try a new toothpaste and to state whether they liked or did not like the new taste. Thirty-two men and 26 women said they did not like the new taste. Does this indicate a difference in preferences between men and women in general?
- a) One horse was selected at random from each of 80 races and categorised according to post position (the position assigned to the horse for the start of the race) and the position in which the horse crossed the finish line (first, second etc.). Using the following data test whether the horse's position at the end of the race is dependent on post position? Which test is being used?

Post	Finnish			
	1	2	3	other
Position 1-4	8	6	8	16
5-9	3	6	5	28

- b) In another study, all of the horses in all of the races for 3 days were classified by post position and by the order in which they finished.

Post	Finnish			
	1	2	3	other
Position 1-4	15	14	15	52
5-9	9	10	9	72

Is the horse's position at the end of the race dependent on post position? Is part (b) different from part (a)? If yes, how.

- Four different methods of growing corn were randomly assigned to a large number of different plots of land and the yield per acre was computed for each plot. Test whether there is a difference in the yield because of methods using the following data.

1	Method		
	2	3	4
83	91	101	78
91	90	100	82
94	81	91	81
89	83	93	77
89	84	96	79
96	83	95	81
91	88	94	80
92	91		
90	89		
	84		