Q1: the **airquality** dataset contains the daily air quality measurements in New York, from May to September 1973. Without assuming the data to have normal distribution, test at .05 significance level if the monthly ozone density in New York has identical data distributions from May to September 1973. What is null hypothesis? What is alternative hypothesis?

Q2: the test results for English and Math tests for a class are given in table below:

English	56	75	45	71	62	64	58	80	76	61
Math	66	70	40	60	65	56	59	77	67	63

Without any assumptions on the distribution of the data, investigate if math and English scores are correlated. Also investigate if math and English scores have any monotonic relation.

Q3:

The table below shows the growth of an insect fed upon a variety of sugar diets where each column represents a diet. Check if there is any significant evidence that shows diet affects the growth.

	C	G	F	FG	S	test
1	75	57	58	58	62	63
2	67	58	61	59	66	64
3	70	60	56	58	65	66
4	75	59	58	61	63	65
5	65	62	57	57	64	67
6	71	60	56	56	62	68
7	67	60	61	58	65	64
8	67	57	60	57	65	NA
9	76	59	57	57	62	NA
10	68	61	58	59	67	NA

Q4:

Table below shows the results for survey of amphibians on 5 month of every year from 2004 to 2006. The first column (count) represents the number of individuals captured. We wish to know if there is any significant difference on count due to year. What is null hypothesis, what is alternate hypothesis?

	count	month	year
1	2	1	2004
2	48	1	2005
3	40	1	2006
4	3	2	2004
5	120	2	2005
6	81	2	2006
7	2	3	2004
8	16	3	2005
9	36	3	2006
10	7	4	2004
11	21	4	2005
12	17	4	2006
13	2	5	2004
14	14	5	2005
15	17	5	2006