Department of Statistics

Paper 475.330 **Assignment 1** **Due: Monday 22 March**

The following data is from a study to determine the dependence of concentrations of the air pollutant, ozone, on meteorological conditions. Measurements of four variables on 111 days, from May to September 1973, at sites in the New York metropolitan region were made. The variables are as follows:

ozone	concentration of the air pollutant
wind	speed of the wind in miles per hour
temperature	daily maximum temperature in °F
radiation	amount of solar radiation

The data is as follows:

ozone	radiation	temperature	wind
41	190	67	7.4
36	118	72	8.0
12	149	74	12.6
18	313	62	11.5
23	299	65	8.6
19	99	59	13.8
8	19	61	20.1
16	256	69	9.7
11	290	66	9.2
14	274	68	10.9
.	.	.	.
.	.	.	.
.	.	.	.
.	.	.	.
.	.	.	.
7	49	69	10.3
14	20	63	16.6
30	193	70	6.9
14	191	75	14.3
18	131	76	8.0
20	223	68	11.5

This is the same data as used in the tutorial. Refer to the tutorial sheet for instructions for getting this data into your account.

You are asked to write a report that clearly describes the relationship between ozone concentration and the other variables. A statistical model is **not** required. Write your report so that someone who is not familiar with statistical ideas and language will be able to understand it. You should include only those graphs that help you present your key findings in a concise manner.

Include a statistical appendix as described in the handout "Writing up Assignments". You should be able to do this assignment just using graphical techniques (you are not required to produce a regression model). On the other hand, you are welcome to use regression models to help you understand the data but don't spend great amounts of time trying to find the "ideal" model.