

Name:

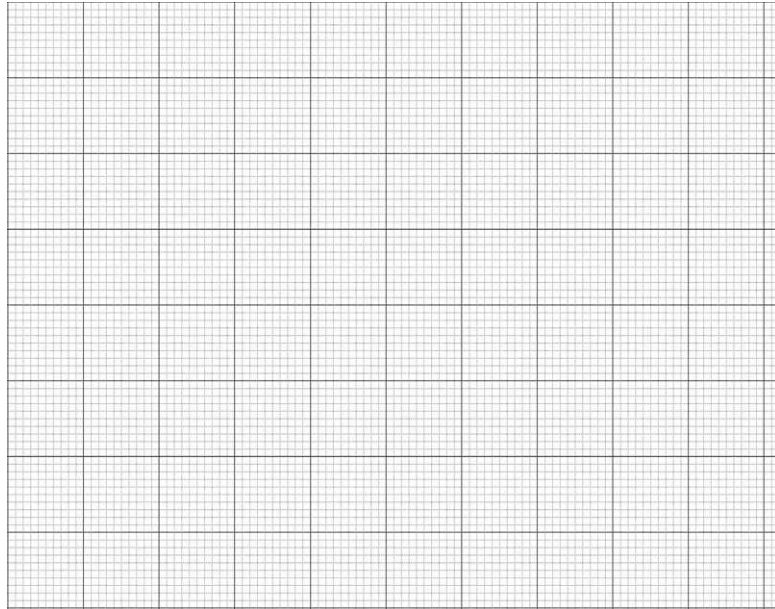
Date:

Investigating the Link Between Between Pressure and Rainfall

Here is some data collected by a weather station on the outskirts of Edinburgh, at the start of 2019.

Date	Atmospheric Pressure (hPa)	Rainfall (mm)
10/12/2018	1025	0.0
11/12/2018	1020	0.0
12/12/2018	1019	0.0
13/12/2018	1022	0.0
14/12/2018	1017	0.0
15/12/2018	988	1.0
16/12/2018	1005	5.1
17/12/2018	1005	0.3
18/12/2018	996	1.5
19/12/2018	995	0.3
20/12/2018	995	0.5
21/12/2018	1000	0.5
22/12/2018	1014	0.0
23/12/2018	1027	0.0
24/12/2018	1032	0.3
25/12/2018	1026	0.3
26/12/2018	1023	0.0
27/12/2018	1023	0.0
28/12/2018	1022	0.0
29/12/2018	1030	2.3
30/12/2018	1030	0.3
31/12/2018	1026	0.0
01/01/2019	1044	0.0
02/01/2019	1043	0.0
03/01/2019	1041	0.0
04/01/2019	1039	0.0
05/01/2019	1034	0.0
06/01/2019	1031	1.0
07/01/2019	1024	0.0
08/01/2019	1033	0.0
09/01/2019	1031	0.0

Using this data, draw a graph of rainfall against pressure.



Now use this information to complete the following sentences:

- 1) The most it rained in one day was _____ mm.
- 2) It didn't rain at all on _____ days.
- 3) The highest pressure recorded was _____ hPa (a hPa, hectopascal, is the same as a millibar).
- 4) The lowest pressure recorded was _____ hPa.
- 5) Using your graph, identify the **median** pressure (the point in the middle, with 15 points to the right and 15 points to the left of it) _____ hPa.
- 6) Does it always rain when the pressure is lower than the median? Use figures to justify your answer.

- 7) Does it ever rain when the pressure is higher than the median? Use figures to justify your answer.

- 8) Some simple weather apps assume that if the pressure is low, it will rain and if the pressure is high, it won't. Does your graph justify this assumption?

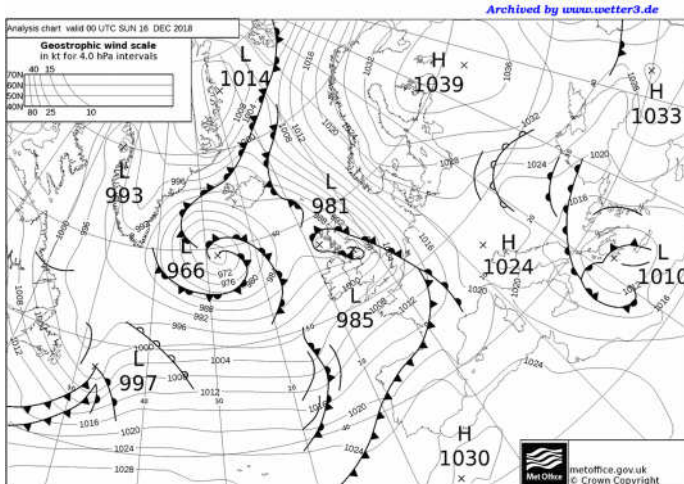
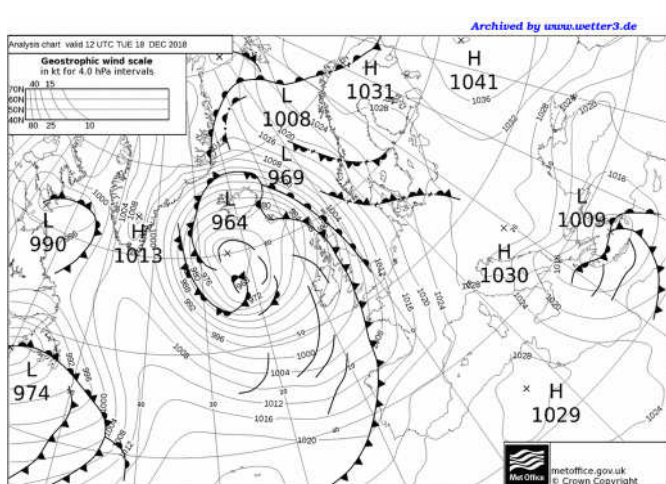
Extension:

Here are the weather maps for 4 of the days when it rained: the first 3 show when the pressure was low and the 4th shows when the pressure was high and it rained.

- a) Mark Edinburgh on each map.
- b) What type of weather feature is near Edinburgh on each map?

1)

2)



3)

4)

