The Large Data Set

All A Level exam boards are obligated to provide a 'large data set'. Data in exam questions will often be from this set, and you are encouraged to explore this data (which is publicly available) in Microsoft Excel.

It is important to note that you are expected to be familiar with this data set before you go into your exam, including some basic geographic knowledge!

Date	Daily Max Temp (09-00-0900 C)	Daily Total Rainfall (0900-0900) (mm)	Daily Total Sunshine (0000-2400) (hrs)	Daily Mean Windspeed (0000-2400) (kn)	Daily Mean Windspeed (0000-2400) (Beaufort conversion)	Daily Maximum Gust (0000-2400) (kn)
01/06/1987	15.1	0.6	4.5	7	Light	19
02/06/1987	12.5	4.7	0	7	Light	22
03/06/1987	13.8	tr	5.6	11	Moderate	25
04/06/1987	15.5	5.3	7.8	7	Light	17
05/06/1987	13.1	19	0.5	10	Light	33
06/06/1987	13.8	0	8.9	19	Fresh	46
07/06/1987	13.2	tr	3.8	11	Moderate	27
08/06/1987	12.9	1	1.7	9	Light	19
09/06/1987	11.2	tr	5.4	6	Light	19
10/06/1987	9.2	1.3	9.7	4	Light	n/a
11/06/1987	12.6	0	12.5	6	Light	18
12/06/1987	10.4	0	11.9	5	Light	n/a
13/06/1987	9.6	0	8.6	5	Light	15
14/06/1987	10.2	0	13.1	5	Light	18
15/06/1987	9.2	3.7	7.1	4	Light	25
16/06/1987	10.4	5.6	8.3	6	Light	25
17/06/1987	12.8	0.1	5.3	10	Light	27
18/06/1987	13.0	7.4	3.2	9	Light	24
19/06/1987	14.0	tr	0.4	12	Moderate	33
20/06/1987	12.6	0	7.7	6	Light	17

Example.

   (a) Describe the type of data represented by daily total rainfall.

Alison is investigating daily maximum gust. She wants to select a sample of size 5 from the first 20 days in Hurn in June 1987. She uses the first two digits of the date as a sampling frame and generates five random numbers between 1 and 20.

   (b) State the type of sample selected by Alison.

   (c) Explain why Alison's process might not generate a sample of size 5.

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The Large Data Set

Locations

5 UK weather stations

3 overseas

Equator

(Map showing locations: Camborne, Hurn, Heathrow, Leeming, Leuchars, Jacksonville, Beijing, Perth)

Time Periods

May – October 1987 (6 months)
May – October 2015 (6 months)

Seasons

May/June are the end of spring
July-Sept is summer
October is autumn

Perth (Australia) is in the southern hemisphere, so July-Sept is winter

UK Great Storm

The night of 15-16th October 1987
Gusts up to 100 knots recorded

Florida hurricanes

12 October 1987 Hurricane Floyd
1-2 October 2015 Hurricane Joaquin

Variables Recorded

Daily Maximum Temperature
°C

Daily Total Rainfall
mm

Daily Total Sunshine
hours

Daily Maximum Relative Humidity
%; mist and fog if > 95%

Daily Mean Windspeed;
Daily Maximum Gust
knots (1kn = 1.15mph)
and Beaufort scale

Daily Mean Wind Direction;
Daily Maximum Gust Direction
bearing (°)
and cardinal direction

Cloud Cover
oktas (eights); 0 – 8

Visibility
Dm (decametres)
1 Dm =10m
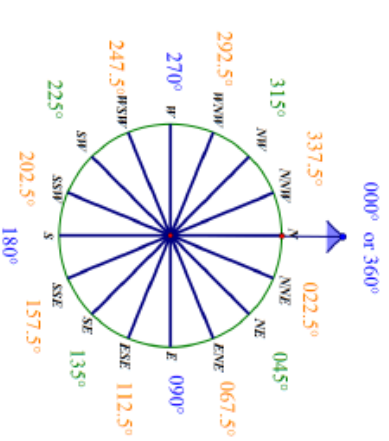
Pressure
hPa (hectoPascal)

n/a
reading not available

tr (trace)
rainfall < 0.05mm

Beaufort Scale

Discrete, scale of 13 values:
0 (calm, < 1kn)
12 (hurricane, 64kn+)

Cardinal Directions

(Compass rose diagram showing bearings: 000° or 360°, 022.5°, 045°, 067.5°, 090°, 112.5°, 135°, 157.5°, 180°, 202.5°, 225°, 247.5°, 270°, 292.5°, 315°, 337.5° with directions N, NNE, NE, ENE, E, ESE, SE, SSE, S, SSW, SW, WSW, W, WNW, NW, NNW)

Oktas

Eighths of the sky covered by cloud
Discrete, scale of 9 values:
0 (clear sky)
8 (completely overcast)