



Free-Standing Mathematics Qualification
Higher Level
June 2015

Data Handling

4986/PM

Unit 6

Preliminary Material

Data Sheet

To be opened and issued to candidates between
Monday 20 April 2015 and Monday 4 May 2015

REMINDER TO CANDIDATES

YOU MUST **NOT** BRING THIS DATA SHEET
WITH YOU WHEN YOU SIT THE EXAMINATION.
A CLEAN COPY WILL BE MADE AVAILABLE.

INFORMATION

The Preliminary Material is to be seen by teachers and candidates **only**, for use during preparation for the examination on Monday 11 May 2015. It **cannot** be used by anyone else for any other purpose, other than as stated in the instructions issued, until after the examination date has passed. It must **not** be provided to third parties.

Cricket scores

Alastair Cook started playing cricket for England in 2006.

The table shows the number of runs he scored in each of the 72 one-day internationals he played in up to June 2013.

Number of runs	Frequency
0	7
1 – 20	21
21 – 40	15
41 – 60	13
61 – 100	11
101 – 140	5

The highest number of runs he scored was 137.

Reading Ease

In 1948 Rudolph Flesch wrote a formula to work out how easy or difficult it is to read some writing.

The formula is

$$\text{Reading Ease score} = 206.835 - 1.015x - 84.6y$$

where x is the mean number of words per sentence
and y is the mean number of syllables per word.

The reading difficulty level is based upon the Reading Ease score.

Reading Ease score	Reading difficulty level
90 – 100	Very easy
80 – 89	Easy
70 – 79	Fairly easy
60 – 69	Standard
50 – 59	Fairly difficult
30 – 49	Difficult
0 – 29	Very confusing

Sea creatures

A newspaper published the results of a survey.

British children aged between 5 and 12 struggle to name some of the most common sea creatures, a new survey has found, with 29 per cent unable to identify an octopus. Here are the 10 least recognised:

1	Clown fish	(46% failed to identify it correctly)
2	Ray	(45%)
3	Otter	(44%)
4	Octopus	(29%)
5	Turtle	(28%)
6	Jellyfish	(26%)
7	Penguin	(18%)
8	Crab	(16%)
9	Seahorse	(8%)
10	Starfish	(4%)

BBC spending

The table shows how much the BBC spent on its television channels in 2012.

Channel	Amount spent (£ millions)
BBC 1	1337.6
BBC 2	537.1
BBC 3	112.9
BBC 4	67.8
BBC News	57.5
CBBC	107.4
CBeebies	42.4
Other	72.3

Turn over

Turn over ►

Library closures

The following is taken from the Sheffield City Council website.



Have your say on the future of Library Services in Sheffield

We want to hear your views about the future of library services in Sheffield.

We want to hear from everyone, whether or not you use library services.

Background information

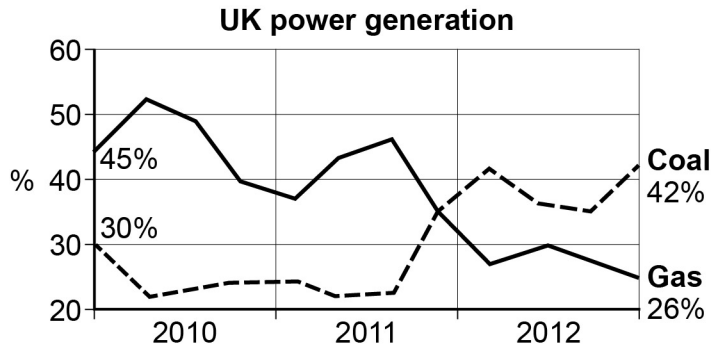
We are currently reviewing library services in Sheffield because:

- The way people use library services in Sheffield is changing. The introduction of new technology has brought in new customers and a demand for new services, whilst at the same time we are experiencing a decline in book borrowing.
- We need to have an affordable library service within budget.
- There are fewer people using our libraries and mobile library services.
- We want to create a new structure for the library service that takes into account future requirements and one that is affordable, so we will consult widely on these new proposals.

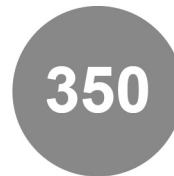
Carbon emission

Electricity is generated in the UK by coal, gas, oil and renewable sources.

A newspaper printed this information to show the percentage of electricity generated by coal and the percentage of electricity generated by gas from the beginning of 2010 to the end of 2012.



grams of carbon
emitted per kilowatt
hour of electricity
generated by coal



grams of carbon
emitted per kilowatt
hour of electricity
generated by gas

950 grams = 0.00095 tonnes

350 grams = 0.00035 tonnes

Turn over

Turn over ►

Exam results

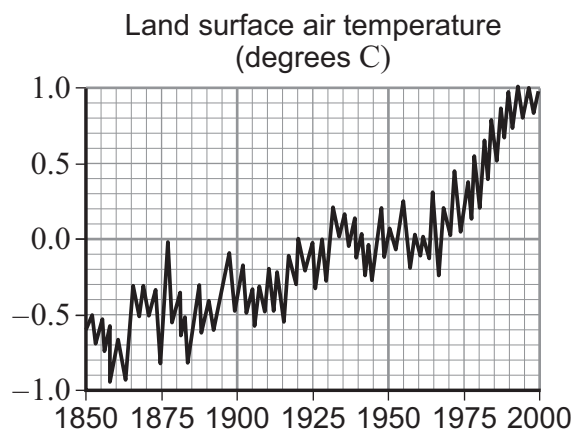
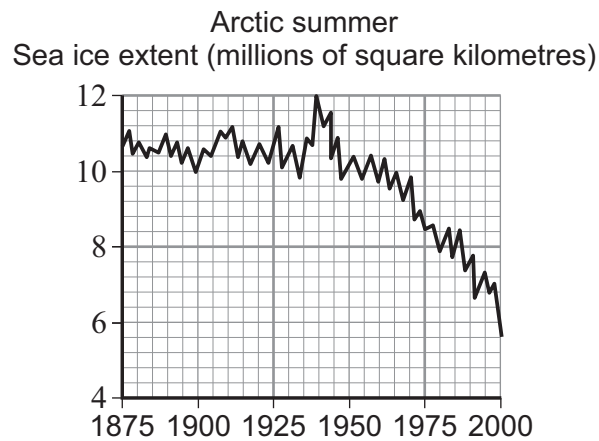
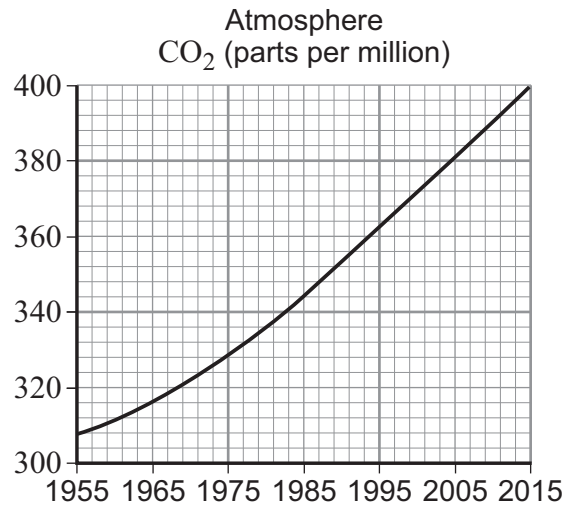
The table shows the results of 2890 students who sat a Functional Mathematics exam in May 2013.

The maximum mark for the exam was 60.

Mark, m	Number of students
$0 \leq m \leq 10$	206
$10 < m \leq 20$	463
$20 < m \leq 30$	645
$30 < m \leq 35$	379
$35 < m \leq 40$	370
$40 < m \leq 50$	603
$50 < m \leq 60$	224

Global warming

A newspaper used these three graphs to show some claimed effects of global warming.

Global changes

END OF DATA SHEET

There are no data printed on this page

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Library closures: © Sheffield City Council

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