



General Certificate of Education
Advanced Subsidiary Examination
June 2013

Use of Mathematics (Pilot) USE1/PM

Algebra

Preliminary Material

Data Sheet

To be opened and issued to candidates between
Monday 29 April 2013 and Monday 13 May 2013

REMINDER TO CANDIDATES

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

Google Chrome

The table shows the market share of the Google Chrome web browser on some occasions after its launch.

Month	Oct '08	Feb '09	Jun '09	Oct '09	Feb '10	Jun '10	Oct '10
Market share (%)	1.0	1.5	2.7	4.4	6.8	9.5	12.0

Growth of bacteria

Bacteria can be grown in a laboratory.

The number of bacteria in a culture can be modelled by the equation

$$N = Ae^{kt}$$

where N is the number of bacteria at time t hours, and A and k are constants.

Fountains

The shape of a water spout in a fountain can be modelled as a parabola.



Turn over

Turn over ►

Construction output

The graph shows the output of the construction industry in the UK between January 2007 and July 2011.

Sections of this graph can be modelled by a cosine function.

The graph cannot be reproduced here due to third-party copyright constraints.

END OF DATA SHEET

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Pingdom.com

Fountains: © Thinkstock

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