

Free-Standing Mathematics Qualification Advanced Level June 2011

# Working with Algebraic 6991/2PM and Graphical Techniques

Unit 11

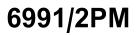
## **Preliminary Material**

## **Data Sheet**

To be opened and issued to candidates between Friday 6 May 2011 and Friday 13 May 2011

### **REMINDER TO CANDIDATES**

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



#### Wembley stadium

The roof of Wembley stadium is supported by an arch that has a span of 315 metres. The arch has a maximum vertical height of 133 metres above ground level.



#### Waste recycling

A council records the amount of household waste that is recycled each year. The results for some years are shown in the table below.

Year	1998	2000	2002	2004	2006	2008
Amount (tonnes)	820	890	1090	1520	2300	3520

#### **Computer speeds**

The average number of operations performed per second (speed) by computer processors is recorded each year. The results for some years are shown in the table below.

Year	1972	1982	1993	2003	2007
Speed	$3.5 \times 10^3$	$1.34 \times 10^5$	$5.5  imes 10^6$	$8.4  imes 10^7$	$4 \times 10^8$

#### Circadian rhythms

Circadian rhythms are 24-hour internally controlled biological changes that occur in plants and animals. In the human body, these changes include fluctuations in temperature, enzyme levels, behaviour and heart rate over a period of one day.

#### END OF DATA SHEET

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Wembley stadium: © Getty Images

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