

**Thursday 21 June 2012 – Afternoon**

**A2 GCE MATHEMATICS**

**4730 Mechanics 3**

**PRINTED ANSWER BOOK**

Candidates answer on this Printed Answer Book.

**OCR supplied materials:**

- Question Paper 4730 (inserted)
- List of Formulae (MF1)

**Other materials required:**

- Scientific or graphical calculator

**Duration:** 1 hour 30 minutes



Candidate forename		Candidate surname	
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Centre number						Candidate number				
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**INSTRUCTIONS TO CANDIDATES**

- These instructions are the same on the Printed Answer Book and the Question Paper.
- The Question Paper will be found in the centre of the Printed Answer Book.
  - Write your name, centre number and candidate number in the spaces provided on the Printed Answer Book. Please write clearly and in capital letters.
  - **Write your answer to each question in the space provided in the Printed Answer Book.** Additional paper may be used if necessary but you must clearly show your candidate number, centre number and question number(s).
  - Use black ink. HB pencil may be used for graphs and diagrams only.
  - Answer **all** the questions.
  - Read each question carefully. Make sure you know what you have to do before starting your answer.
  - Do **not** write in the bar codes.
  - You are permitted to use a scientific or graphical calculator in this paper.
  - Give non-exact numerical answers correct to 3 significant figures unless a different degree of accuracy is specified in the question or is clearly appropriate.
  - The acceleration due to gravity is denoted by  $g \text{ m s}^{-2}$ . Unless otherwise instructed, when a numerical value is needed, use  $g = 9.8$ .

**INFORMATION FOR CANDIDATES**

- This information is the same on the Printed Answer Book and the Question Paper.
- The number of marks is given in brackets [ ] at the end of each question or part question on the Question Paper.
- **You are reminded of the need for clear presentation in your answers.**
- The total number of marks for this paper is **72**.
- The Printed Answer Book consists of **16** pages. The Question Paper consists of **8** pages. Any blank pages are indicated.

<b>1 (i)</b>	
<b>1 (ii)</b>	
<b>1 (iii)</b>	

<b>2 (i)</b>	
<b>2 (ii)</b>	



<b>3 (i)</b>	(continued)
<b>3 (ii)</b>	













<b>6 (iii)</b>	
<b>6 (iv)</b>	





<b>7 (iii)</b>	
<b>7 (iv)</b>	

<b>7 (iv)</b>	(continued)
<b>7 (v)</b>	

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