

Please check the examination details below before entering your candidate information

Candidate surname

Other names

Pearson Edexcel
International
Advanced Level

Centre Number

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Candidate Number

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Wednesday 24 October 2018

Morning (Time: 1 hour 30 minutes)

Paper Reference **WME01/01**

Mechanics M1

Advanced/Advanced Subsidiary

You must have:

Mathematical Formulae and Statistical Tables (Blue)

Total Marks

Candidates may use any calculator allowed by the regulations of the Joint Council for Qualifications. Calculators must not have the facility for symbolic algebra manipulation, differentiation and integration, or have retrievable mathematical formulae stored in them.

Instructions

- Use **black** ink or ball-point pen.
- If pencil is used for diagrams/sketches/graphs it must be dark (HB or B). Coloured pencils and highlighter pens must not be used.
- **Fill in the boxes** at the top of this page with your name, centre number and candidate number.
- Answer **all** questions and ensure that your answers to parts of questions are clearly labelled.
- Answer the questions in the spaces provided
– *there may be more space than you need.*
- You should show sufficient working to make your methods clear. Answers without working may not gain full credit.
- Whenever a numerical value of g is required, take $g = 9.8 \text{ m s}^{-2}$, and give your answer to either two significant figures or three significant figures.
- When a calculator is used, the answer should be given to an appropriate degree of accuracy.

Information

- The total mark for this paper is 75.
- The marks for **each** question are shown in brackets
– *use this as a guide as to how much time to spend on each question.*

Advice

- Read each question carefully before you start to answer it.
- Try to answer every question.
- Check your answers if you have time at the end.

Turn over ►

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Pearson

Question 1 continued

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(Total 6 marks)

Q1



Question 2 continued

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Question 2 continued

Lined area for writing the answer to Question 2.

(Total 8 marks)

Q2



- Find

- (7)

Question 3 continued

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Question 3 continued

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(Total 7 marks)

Q3





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Question 4 continued

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Question 4 continued

Lined area for writing the answer to Question 4.

(Total 7 marks)

Q4

Box for marking the question.



Question 5 continued

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Question 5 continued

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(Total 9 marks)

Q5



6. The point A on a horizontal playground has position vector $(3\mathbf{i} - 2\mathbf{j})\text{m}$. At time $t = 0$, a girl kicks a ball from A . The ball moves horizontally along the playground with constant velocity $(4\mathbf{i} + 5\mathbf{j})\text{ms}^{-1}$.

(a) the speed of the ball, (2)

(b) the position vector of the ball at time t seconds. (2)

(c) Find the value of T . (2)

Given that the boy intercepts the ball,

(d) find the value of ν . (5)

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Question 6 continued

Lined area for writing the answer to Question 6.



Question 6 continued

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Question 6 continued

Lined area for writing the answer to Question 6.

(Total 11 marks)

Q6



- (3)

- (3)

(4)

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Question 7 continued

Lined area for writing the answer to Question 7.



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Question 7 continued

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Lined area for writing the answer to Question 7.

Q7

(Total 10 marks)



Question 8 continued

Handwriting practice area with 30 horizontal lines.

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Question 8 continued

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Question 8 continued

Lined area for writing the answer to Question 8.

Q8

Grading box for Question 8.

(Total 17 marks)

TOTAL FOR PAPER: 75 MARKS

END

