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Other Names										
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For Examiner's Use	
Examiner's Initials	
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TOTAL	



General Certificate of Secondary Education
Higher Tier
March 2013

Mathematics

43602H

Unit 2

Monday 4 March 2013 9.00 am to 10.15 am

H

<p>For this paper you must have:</p> <ul style="list-style-type: none"> mathematical instruments. <p>You must not use a calculator.</p>	
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Time allowed

- 1 hour 15 minutes

Instructions

- Use black ink or black ball-point pen. Draw diagrams in pencil.
- Fill in the boxes at the top of this page.
- Answer **all** questions.
- You must answer the questions in the spaces provided. Do not write outside the box around each page or on blank pages.
- Do all rough work in this book.

Information

- The marks for questions are shown in brackets.
- The maximum mark for this paper is 66.
- The quality of your written communication is specifically assessed in Questions 4 and 5. These questions are indicated with an asterisk (*).
- You may ask for more answer paper and graph paper. These must be tagged securely to this answer booklet.

Advice

- In all calculations, show clearly how you work out your answer.



M A R 1 3 4 3 6 0 2 H 0 1

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Answer **all** questions in the spaces provided.

- 1 The table shows the charge for taking a suitcase on a plane.

Weight of suitcase	Charge
Under 15 kg	Free
15 kg – 22 kg	£20
Over 22 kg	£20 plus £5 for each extra kilogram or part of a kilogram over 22 kg

- 1 (a) Work out the charge for a suitcase that weighs 24 kg.

$$20 + 5(24 - 22) = 20 + 5(2) = \pounds 30$$

Answer £ 30 (2 marks)

- 1 (b) Work out the charge for a suitcase that weighs 24.3 kg.

Answer £ 35 (1 mark)

- 1 (c) Jack has two suitcases.
He pays a total charge of £70.
One suitcase weighs 21 kg.

What is the **most** the other suitcase could weigh?

$$\text{Total Charge} = 40 + 5x = 70, \text{ where } x = \text{the maximum additional weight of Jack's other suitcase.}$$

$$x = \frac{70 - 40}{5} = \frac{30}{5} = 6 \text{ kg. } 22 + 6 = 28 \text{ kg}$$

Answer 28 kg (3 marks)

