

GENERAL CERTIFICATE OF SECONDARY EDUCATION MATHEMATICS C (GRADUATED ASSESSMENT)

M3 B243A

MODULE M3 - SECTION A

MONDAY 22 JANUARY 2007

Morning

Time: 30 minutes

Candidates answer on the question paper.

Additional materials: Geometrical instruments

Tracing paper (optional)



Candidate Name						
Centre Number			Candidate Number			

INSTRUCTIONS TO CANDIDATES

- Write your name, Centre Number and Candidate Number in the boxes above.
- Answer all the questions.
- Use blue or black ink. Pencil may be used for graphs and diagrams only.
- Read each question carefully and make sure you know what you have to do before starting your answer.
- In many questions marks will be given for a correct method even if the answer is incorrect.
- Do not write in the bar code.
- Do not write outside the box bordering each page.
- WRITE YOUR ANSWER TO EACH QUESTION IN THE SPACE PROVIDED. ANSWERS WRITTEN ELSEWHERE WILL NOT BE MARKED.

INFORMATION FOR CANDIDATES

- The number of marks is given in brackets [] at the end of each question or part question.
- The total number of marks for this Section is 25.

WARNING
You are not allowed to use a calculator in Section A of this paper.

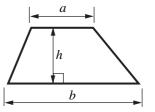
For Examiner's Use						
Section A						
Section B						
Total						

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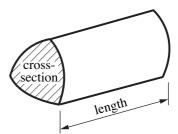
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Formulae Sheet

Area of trapezium = $\frac{1}{2}(a+b)h$



Volume of prism = (area of cross-section) \times length



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1	Work out.	
	Wark all	

(a) $2 \cdot 1 \times 4$

(a).....[1]

(b) 19 ÷ 100

(b)[1]

(c) $3.6 \div 6$

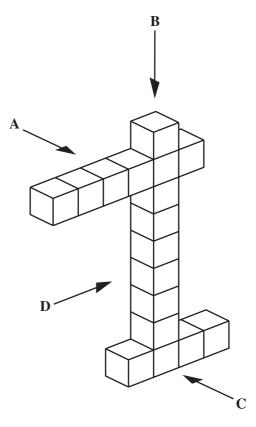
(c).....[1]

(d) $3 + 2 \times (4 + 1)$

(**d**)[2]

5

Here is a sketch of a model tower crane.It is made from cubes.You can see all the cubes.

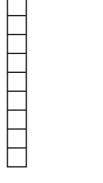


(a) Each cube in the model has a mass of 4 g.

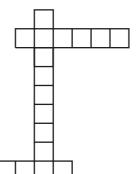
What is the total mass of the model?



- (b) Complete each of these sentences. Use the letters from the diagram.
 - (i) This is the view looking along arrow

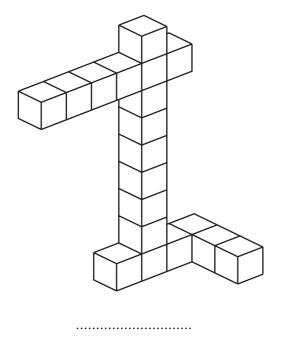


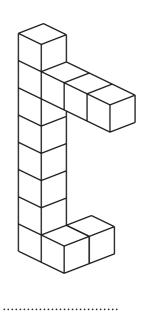
(ii) This is the view looking along arrow

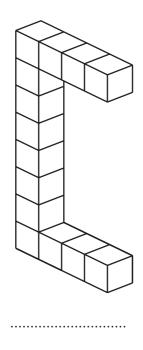


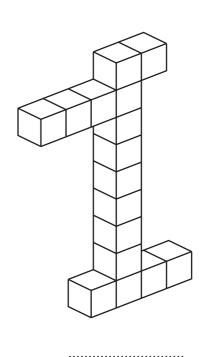
[2]

(c) Put a tick (✓) under each model that has reflection symmetry.
 Put a cross (✗) under each model that does not have reflection symmetry.



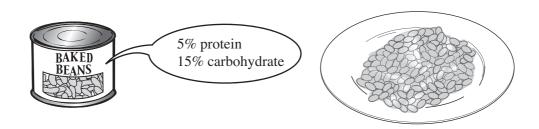






[2]

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(a) What weight of protein is there in 200 g of baked beans?

(a)	g	[2]
-----	---	-----

(b) What weight of carbohydrate is there in 200 g of baked beans?



4 This is the morning timetable for the school bus.

High Street	07 48
Shipp Road	08 04
Balmead Crossroads	08 15
Freeland Estate	08 21
School	08 28

	(a	1)	How	long	does	the	bus	take	from	Shipp	Road	to	Scho	ol'
--	----	----	-----	------	------	-----	-----	------	------	-------	------	----	------	-----

(a)		minutes	[1]
-----	--	---------	-----

(b) How long does the bus take from High Street to Shipp Road?

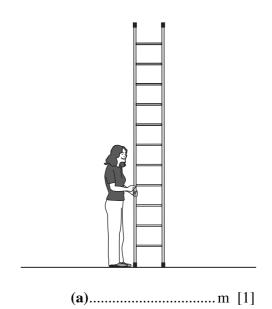
(b) minutes [1]

2

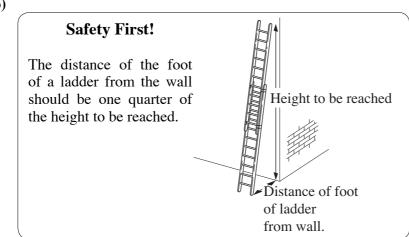
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5 (a) This picture shows a woman with a ladder.

Estimate the length of the ladder.



(b)



(i) A ladder has to reach a height of 8 m.

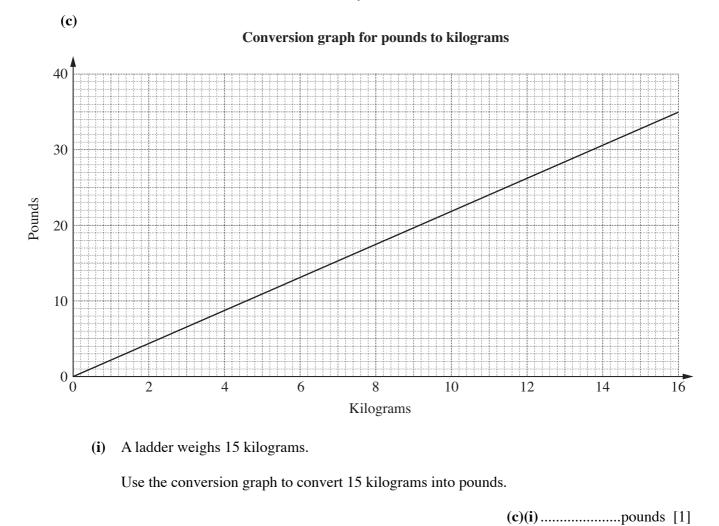
Use the rule to find the distance of the foot of the ladder from the wall.

(b)(i)...... m [1]

(ii) The distance of the foot of a ladder from a wall is 80 cm.

Use the rule to find the height the ladder will reach. Give your answer in metres.

(ii)..... m [2]



...... because

TURN OVER FOR QUESTION 5(d)

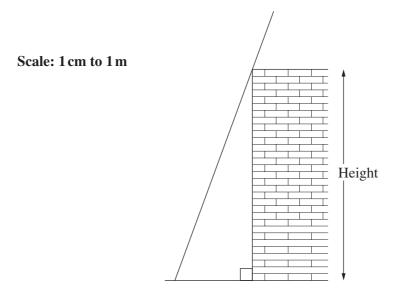
Which is heavier, a ladder weighing 20 pounds or one weighing 10 kilograms?

(ii)

Give a reason for your answer.

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(d) This is a scale drawing of a ladder and a wall. The wall is at right-angles to the ground.



What is the height of the **real** wall?

Give the units of your answer.

(d)	[2]
	9

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