

GENERAL CERTIFICATE OF SECONDARY EDUCATION MATHEMATICS C (GRADUATED ASSESSMENT)

M2^{B242A}

MODULE M2 - SECTION A

TUESDAY 13 MARCH 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.

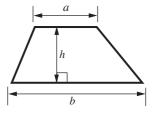
For Examiner's Use					
Section A					
Section B					
Total					

This document consists of	12	printed	pages
---------------------------	----	---------	-------

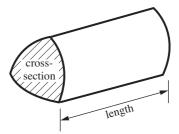
SP (SM/CGW) T35022/2 © OCR 2007 [100/1142/0] OCR is an exempt charity **[Turn over**

Formulae Sheet

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



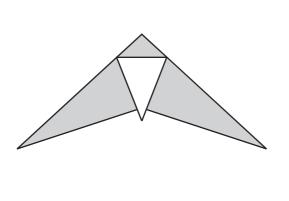
Volume of prism = (area of cross-section) \times length

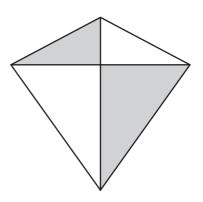


PLEASE DO NOT WRITE ON THIS PAGE

1 Here are some drawings.

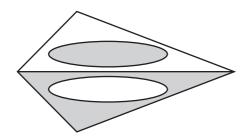
Put a tick (\checkmark) under those that **have** reflection symmetry. Put a cross (χ) under those that **do not have** reflection symmetry.

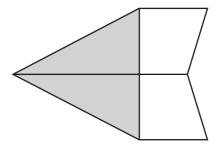




.....







.....

.....

[2]

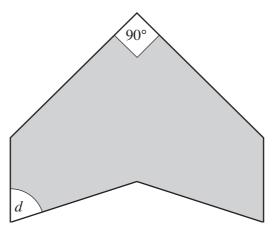
2

© OCR 2007

		4	
2	(a)	A kite has a mass of 1.5 kilograms.	
		How many grams are there in 1.5 kilograms?	
			(a) g [1]
	(b)	One metre of kite string has a mass of Ag	(-)
	(D)	One metre of kite string has a mass of 4 g.	
		What is the mass of 32 m of this kite string?	
			(b) g [2]
	(c)	The world record height for flying a kite is four thousand four hundred and thirty seven metres.	
		Write four thousand four hundred and thirty seven in figures.	
		Title four diousund four hundred and unity seven in figures.	

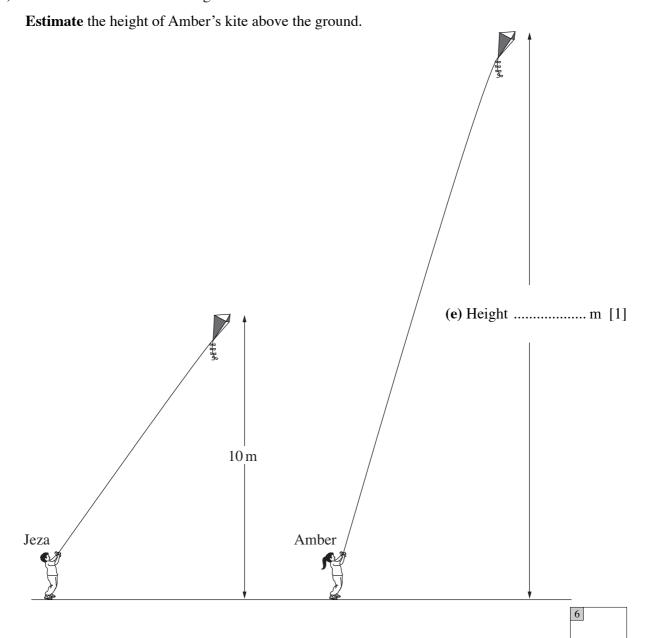


(d) Estimate the angle d marked on this kite.



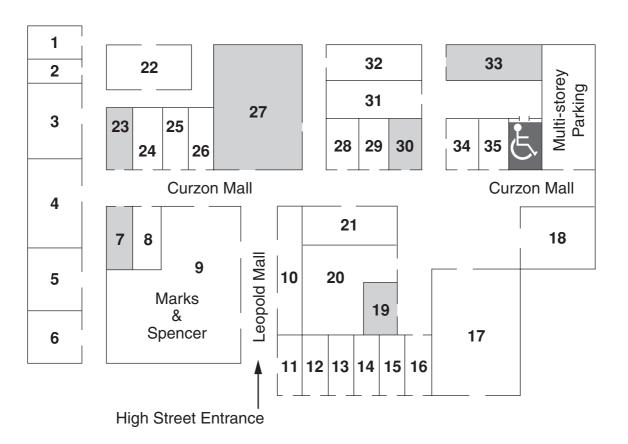
(**d**)° [1]

(e) Jeza's kite is 10 m above the ground.



[Turn over

3 Here is a map of a shopping centre.
All the phone shops are shaded in grey and shown in the key.



	PHONES	
Disabled Toilets	02	7
	Fone Zone Phones R Us	19 23
	Orange	27
	Phone 4 U	30
	Phone Shop	33

(a) Two friends enter the centre at the High Street entrance.

Which phone shop is straight in front of them?

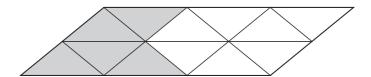
(a)[1]

(b)	Complete these directions to get to the disabled toilets from the High Street entrance.	
	Go straight ahead,	
	take the first turning on the	
	then the turning on the	
	then turn	[2]
(c)	San turns left out of shop 28 and walks along Curzon Mall.	
	Which is the next phone shop she comes to?	

(c)[1]

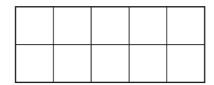
© OCR 2007 [Turn over

4 (a) What fraction of this shape is shaded?



(a).....[1]

(b) Shade $\frac{1}{5}$ of this shape.

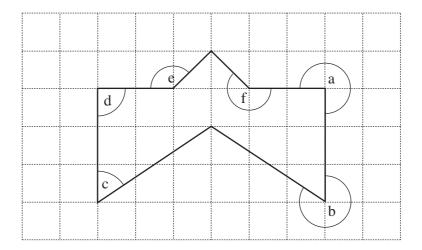


[1]

(c) Write $\frac{3}{4}$ as a decimal.

(c)	[1]
3	

5 This shape is drawn on a square grid.



Put the letter for each angle in the correct column of the table.

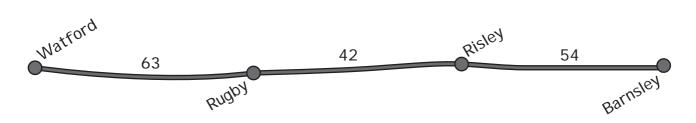
Acute angle	Obtuse angle	Reflex angle	Right angle

[3]

3

© OCR 2007 [Turn over

6 Tina is driving from Watford to Barnsley on the M1. This sketch shows the distances in miles between some places on the M1.



(a) H	Iow	far	is	it	from	Watfor	d to	Risley	1
----	-----	-----	-----	----	----	------	--------	------	--------	---

(a)	miles	[1]
(/		L - J

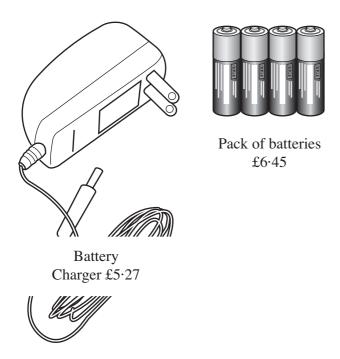
(b) Tina has travelled 19 miles from Risley towards Barnsley.

How much **further** is it to Barnsley?

(b)miles [1]



7 Work out the total cost of this battery charger and the pack of batteries.

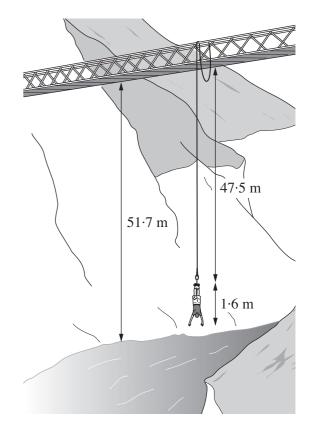


8 Karli does a bungee jump from a bridge. The bridge is 51.7 m above a river.

At the lowest point the rope is $47.5 \,\mathrm{m}$ long.

Karli is 1.6 m tall.

How close does she get to the water?



 ••••	.m	[3]
3		



PLEASE DO NOT WRITE ON THIS PAGE

Copyright Acknowledgements:

Permission to reproduce items where third-party owned material protected by copyright is included has been sought and cleared where possible. Every reasonable effort has been made by the publisher (OCR) to trace copyright holders, but if any items requiring clearance have unwittingly been included, the publisher will be pleased to make amends at the earliest possible opportunity.

OCR is part of the Cambridge Assessment Group. Cambridge Assessment is the brand name of University of Cambridge Local Examinations Syndicate (UCLES), which is itself a department of the University of Cambridge.