

**GENERAL CERTIFICATE OF SECONDARY EDUCATION
 MATHEMATICS C (GRADUATED ASSESSMENT)
 MODULE M2 – SECTION B**

M2

TUESDAY 24 JUNE 2008

Morning
 Time: 30 minutes

Candidates answer on the question paper
Additional materials (enclosed): None

Additional materials (required):
 Geometrical instruments
 Tracing paper (optional)
 Electronic calculator



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Candidate Forename

Candidate Surname

Centre Number

Candidate Number

INSTRUCTIONS TO CANDIDATES

- Write your name in capital letters, your Centre Number and Candidate Number in the boxes above.
- Use blue or black ink. Pencil may be used for graphs and diagrams only.
- Read each question carefully and make sure that you know what you have to do before starting your answer.
- Show your working. Marks may be given for a correct method even if the answer is incorrect.
- Answer **all** the questions.
- Do **not** write in the bar codes.
- Write your answer to each question in the space provided.

INFORMATION FOR CANDIDATES

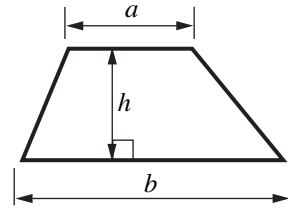
- The number of marks is given in brackets [] at the end of each question or part question.
- The total number of marks for this Section is **25**.
- Section B starts with question 9.
- You are expected to use a calculator in Section B of this paper.

FOR EXAMINER'S USE	
SECTION B	

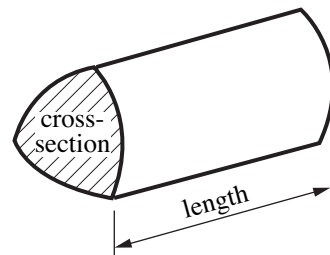
This document consists of **8** printed pages.

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

9 Ajit and some friends are going to Krakow in Poland. They are flying from Luton.



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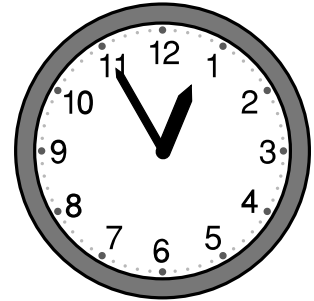
- (a) The total cost of the tickets is £480. They get a reduction of 25%.

Calculate 25% of £480.

(a) £ [1]

- (b) The flight from Luton to Krakow takes three hours. The plane takes off at 12:55 UK time.

At what UK time should it land?



(b) [1]

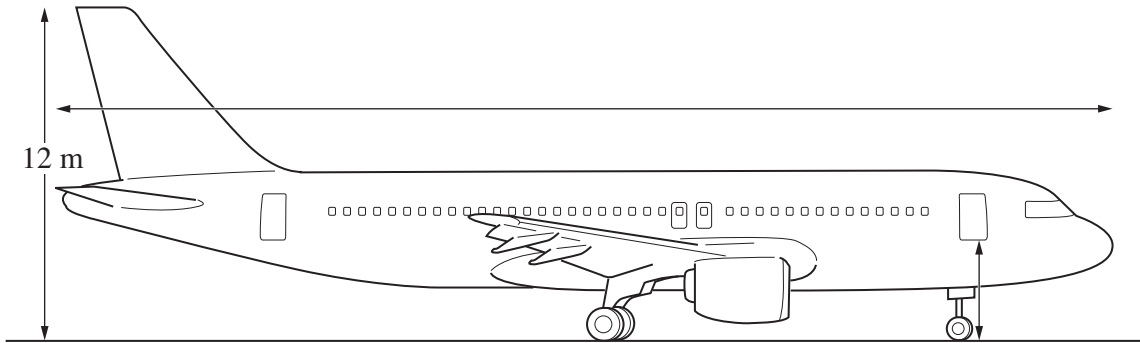
- (c) Natasha finds this formula in a guide book.

$$\text{The time in Poland} = \text{The time in the UK} + 1 \text{ hour}$$

What is the time in Poland when it is 8 am in the UK?

(c) am [1]

- 10 (a) Here is a Boeing 737.
The tip of the tail is 12 m above the ground.



- (i) Estimate the height of the bottom of the front door above the ground.

(a)(i) m [1]

- (ii) Estimate the length of the plane.

(ii) m [1]

- (b) A football club arranges a trip to take 1000 supporters to Krakow.
A Boeing 737 can carry 189 passengers.

- (i) How many of these planes are needed to carry 1000 supporters?

(b)(i) [2]

- (ii) How many spare seats are there?

(ii) [2]

- 11 The currency used in Poland is the zloty.
This formula changes UK pounds into zlotys.

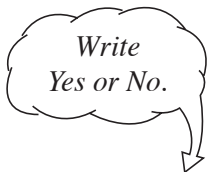
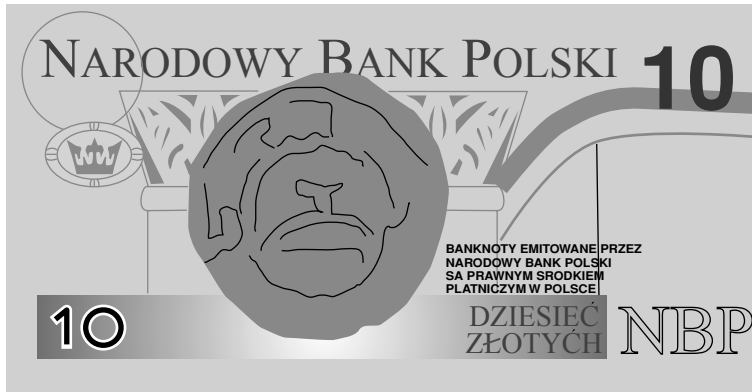
$$\text{Number of zlotys} = 6 \times \text{Number of pounds}$$

- (a) Change £47 into zlotys.

(a) zlotys [1]

- (b) Kali says “A 10 zloty note is worth more than £1”.

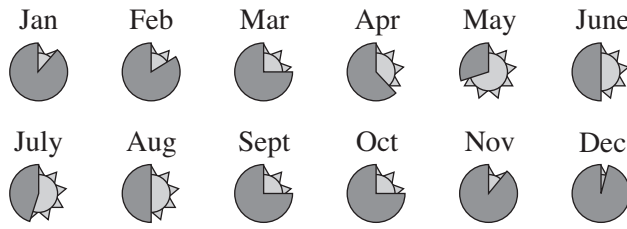
Is she correct? Give a reason for your answer.



..... because

..... [2]

12 (a) Natasha finds this chart on a website.
It shows the proportion of sunshine during the day, for each month.



Weather in Krakow

(i) In which month is there most sunshine?

(a)(i) [1]

(ii) Which months have 25% sunshine?

..... [2]

(b) Natasha finds some more information about the weather in Krakow.

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Rainfall (mm)	28	28	35	46	46	94	111	91	62	49	37	36
Temp (°C)	-4	-2	2	8	13	17	18	18	14	9	3	-2

(i) Which month has the greatest rainfall?

(b)(i) [1]

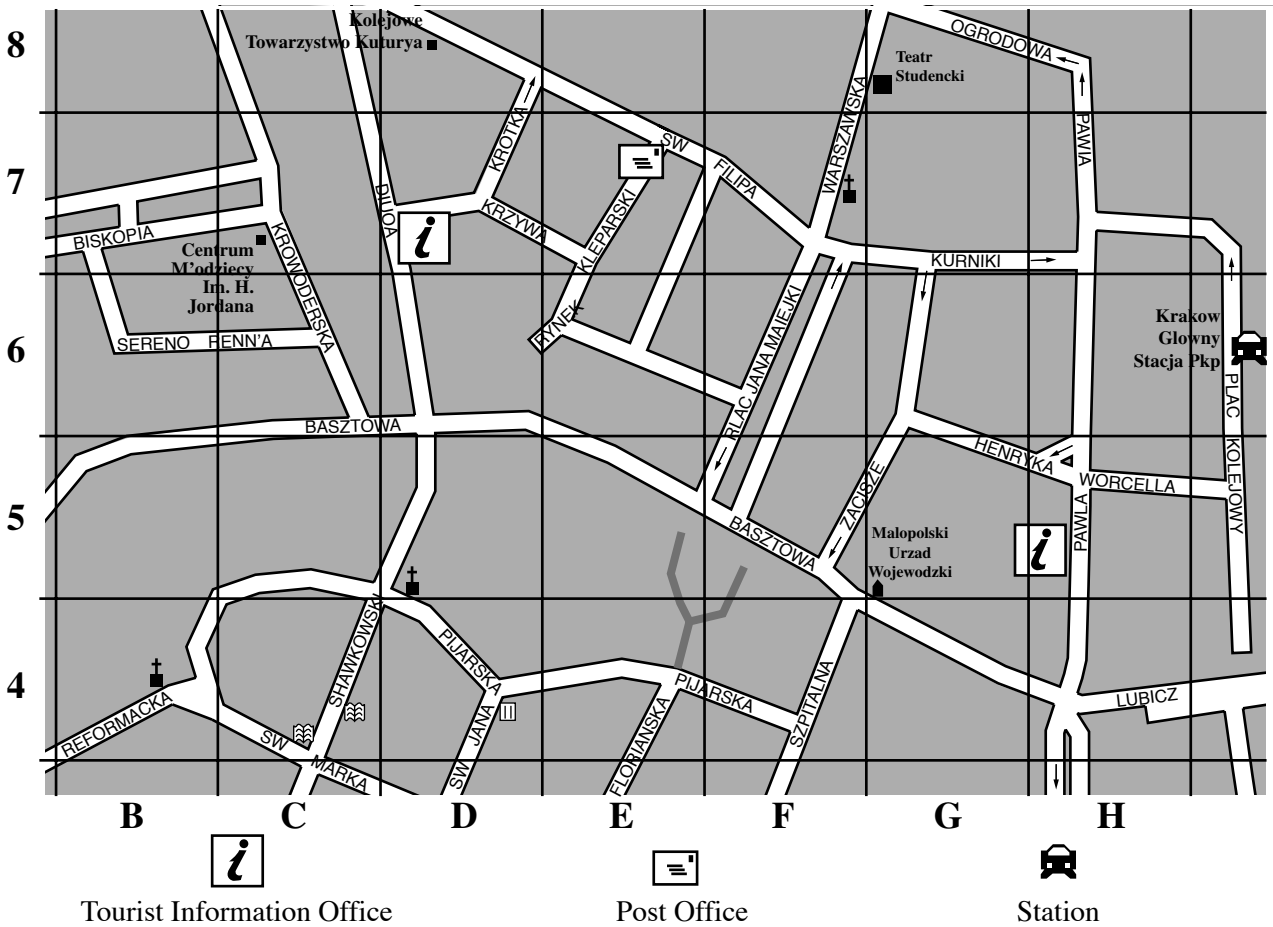
(ii) Which is the coldest month?

(ii) [1]

(iii) Work out the difference between the November and December temperatures.

(iii) °C [2]

13 This map shows part of Krakow.



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(a) In which square is there a Post Office?

(a) [1]

(b) Anil and Kali have agreed to meet inside the Tourist Information Office in square D7. By mistake Anil waits inside the Tourist Information Office in H5. Complete these directions for Anil to reach the Tourist Information Office in square D7. Use “right” and “left” as needed.

Turn^{right}..... out of the Tourist Information Office.

Take the first turn on the

Carry on walking and take the fourth turning on the

Walk down the street.

The Tourist Information Office is on the

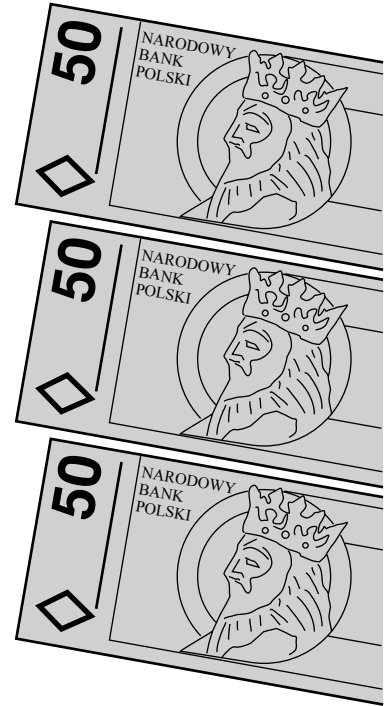
[2]

TURN OVER FOR QUESTION 14

- 14 At the end of his trip to Krakow, Ajit has 150 zlotys left.
He buys these presents.

- 3 bottles of perfume costing 38.50 zlotys each.
- 1 key ring costing 14.35 zlotys.

After buying these presents,
how much change should Ajit get?



..... zlotys [3]

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