

Surname	Centre Number	Candidate Number
Other Names		0



GCSE

4353/01

**MATHEMATICS (UNITISED SCHEME)
UNIT 3: Calculator-Allowed Mathematics
FOUNDATION TIER**

A.M. THURSDAY, 17 January 2013

1 $\frac{1}{2}$ hours

ADDITIONAL MATERIALS

A calculator will be required for this paper.

INSTRUCTIONS TO CANDIDATES

Use black ink or black ball-point pen. Do not use gel pen or correction fluid.

Write your name, centre number and candidate number in the spaces at the top of this page.

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

If you run out of space, use the continuation page at the back of the booklet, taking care to number the question(s) correctly.

Take π as 3.14 or use the π button on your calculator.

INFORMATION FOR CANDIDATES

You should give details of your method of solution when appropriate.

Unless stated, diagrams are not drawn to scale.

Scale drawing solutions will not be acceptable where you are asked to calculate.

The number of marks is given in brackets at the end of each question or part-question.

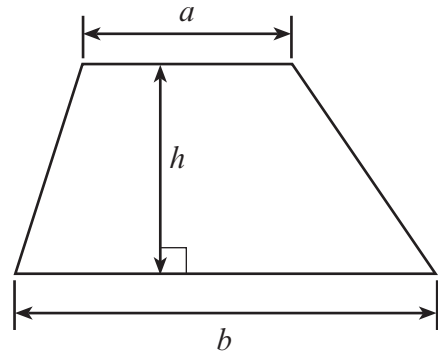
You are reminded that assessment will take into account the quality of written communication (including mathematical communication) used in your answer to question 9.

For Examiner's use only		
Question	Maximum Mark	Mark Awarded
1	11	
2	8	
3	3	
4	4	
5	6	
6	8	
7	7	
8	4	
9	8	
10	5	
11	7	
12	5	
13	4	
TOTAL MARK		

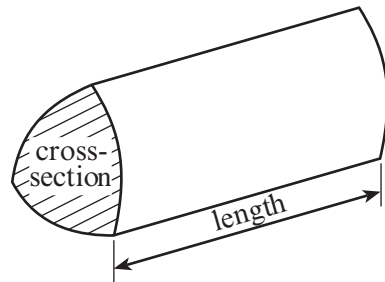


Formula List

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



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



1. (a) (i) The following is part of a weekly food bill for a family.
Complete the bill.

Item	Cost
2 joints of meat @ £9.85 each	£ 19.70
8 loaves of bread @ £1.57 each	£
14 litres of milk @ 83p per litre	£
3 packets of cereal @ £1.64 per packet	£
Total	£

[4]

- (ii) What change would you get if you paid the bill with three £20 notes?

.....

.....

.....

[2]

- (iii) The shop that supplies the food gives 5 loyalty points for every £10 spent.
How many points will this bill deserve?

.....

.....

.....

.....

[2]

- (b) (i) Write 5.324 correct to 2 decimal places.

.....

[1]

- (ii) Write 74.63 correct to the nearest whole number.

.....

[1]

- (iii) Write 65 839 correct to the nearest 1000.


.....

[1]



2. (a) The table shows the number of crates of oranges sold by a wholesaler in each of four weeks.

Week number	1	2	3	4
Number of crates	120	220	170	110

Draw a pictogram to represent the above information, using  to represent 40 crates.

Week 1	
Week 2	
Week 3	
Week 4	

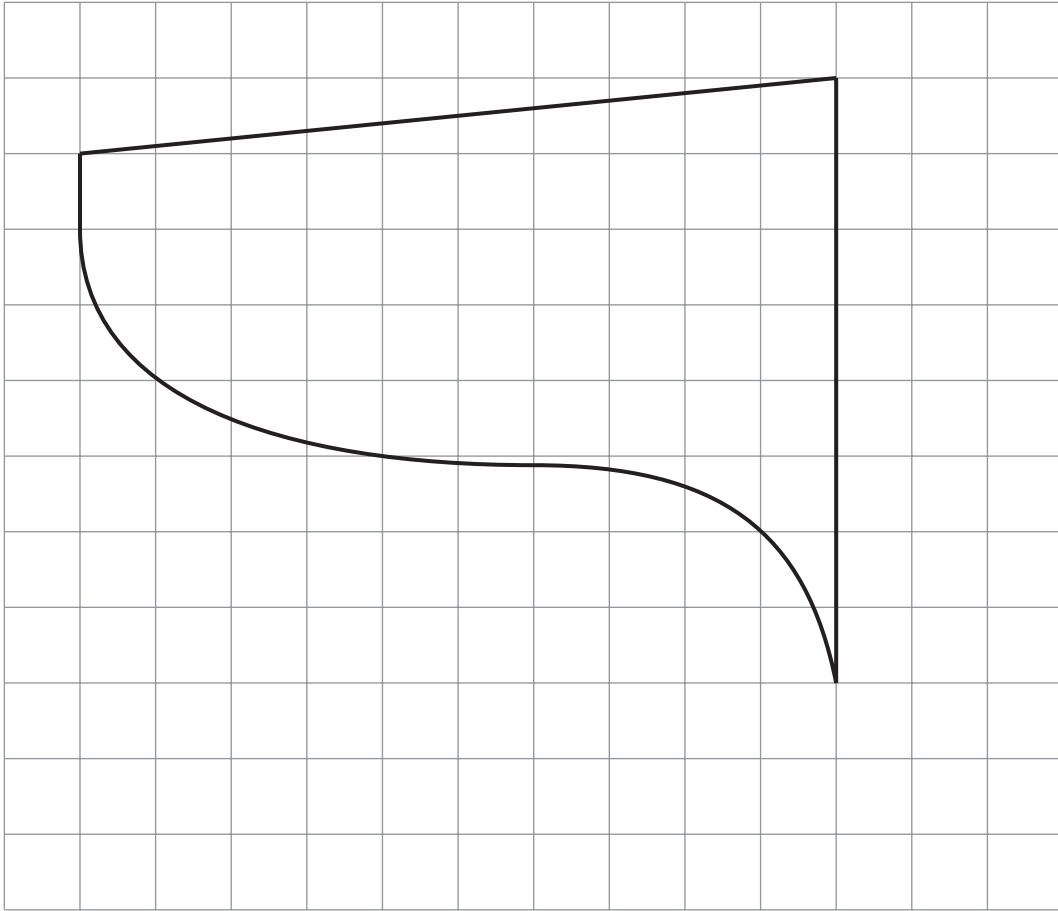
[4]

- (b) On the squared paper on the following page draw a bar graph to represent the data given above.

[4]



3.



The above shape represents the outline of a field on a map drawn to scale.
Each square on the grid represents 10 m^2 .
Find an estimate for the area of the field.

.....

.....

.....

.....

.....

.....

Area of the field = m^2

[3]



4. The diagram represents a rectangular garden with dimensions of 8 m by 5 m.

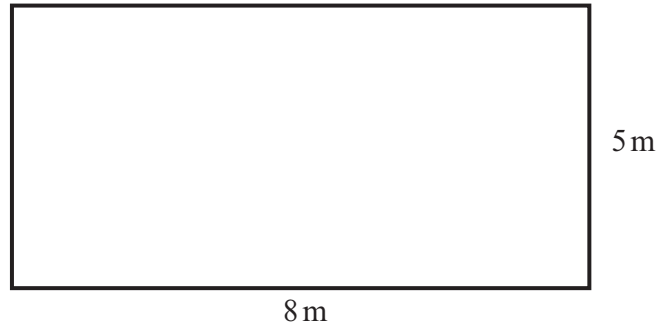


Diagram not drawn to scale

- (a) Calculate the perimeter of the garden, giving the units of your answer.

.....
.....
.....

[2]

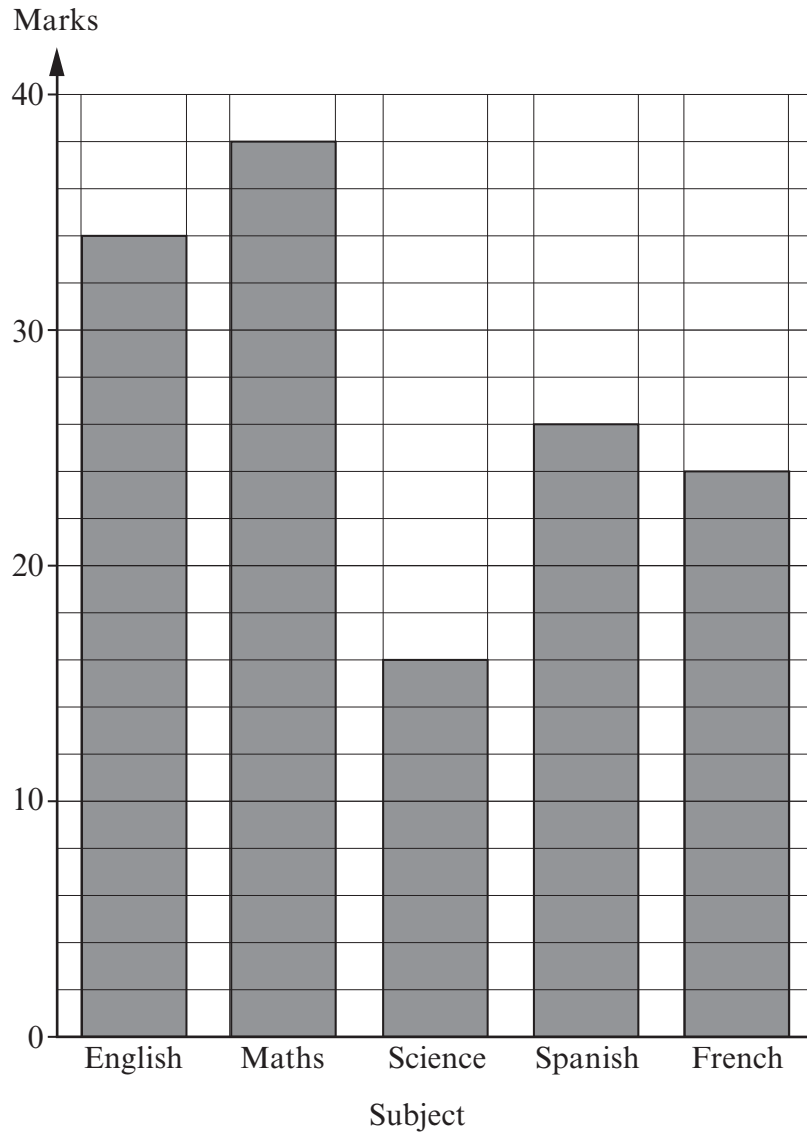
- (b) Calculate the area of the garden.

.....
.....
.....

[2]



5. Jake has taken tests in five subjects.
Each test is marked out of 40.
The diagram shows his results.



- (a) What is the range of the marks scored by Jake?

.....
 [2]

- (b) Write down Jake's median mark.

.....
 [1]



(c) Showing all your working, find the mean number of marks scored by Jake.

.....

.....

.....

.....

.....

.....

[3]

4353
010009



6. (a) Complete an accurate drawing of the triangle ABC , in which $BC = 11$ cm, $\widehat{ABC} = 73^\circ$ and $\widehat{ACB} = 55^\circ$.
The line BC has been drawn for you.

[3]



(b) Using a ruler and a pair of compasses, bisect the line XY .

[2]



(c) Using a ruler and a pair of compasses, construct an angle of 30° at the point A .

[3]



7. (a) Calculate $\frac{5}{8} - \frac{1}{4}$.

.....

.....

..... [2]

(b) Solve $3x + 8 = 23$.

.....

.....

..... [2]

(c) Given that $B = 3T + 2W$, find W when $B = 32$ and $T = 6$.

.....

.....

.....

..... [3]

8. Find the value of the following, giving each answer correct to four significant figures.

(a) $\frac{300.27}{24.36 \times 6.74}$

.....

..... [2]

(b) $5.8^2 - 4.79 + \sqrt{34.5 \div 9.64}$

.....

..... [2]



9. You will be assessed on the quality of your written communication in this question.

The table below shows the basic hotel costs for a two week holiday in August.

Start date	Price for each adult (£)	Price for each child (£)
August 1	654	Half adult price + £100
August 15	668	Half adult price + £150
August 29	586	Half adult price

Supplements	Sea view	£10 per person per night
	Balcony	£6 per person per night

Mr and Mrs Hodgkin book a two week holiday for themselves and their three children with a start date of 15th August.
 They decide to book rooms with a sea view and a balcony.
 Calculate the total amount that they have to pay the hotel.
 You must explain each step of your calculation and show all your working.

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

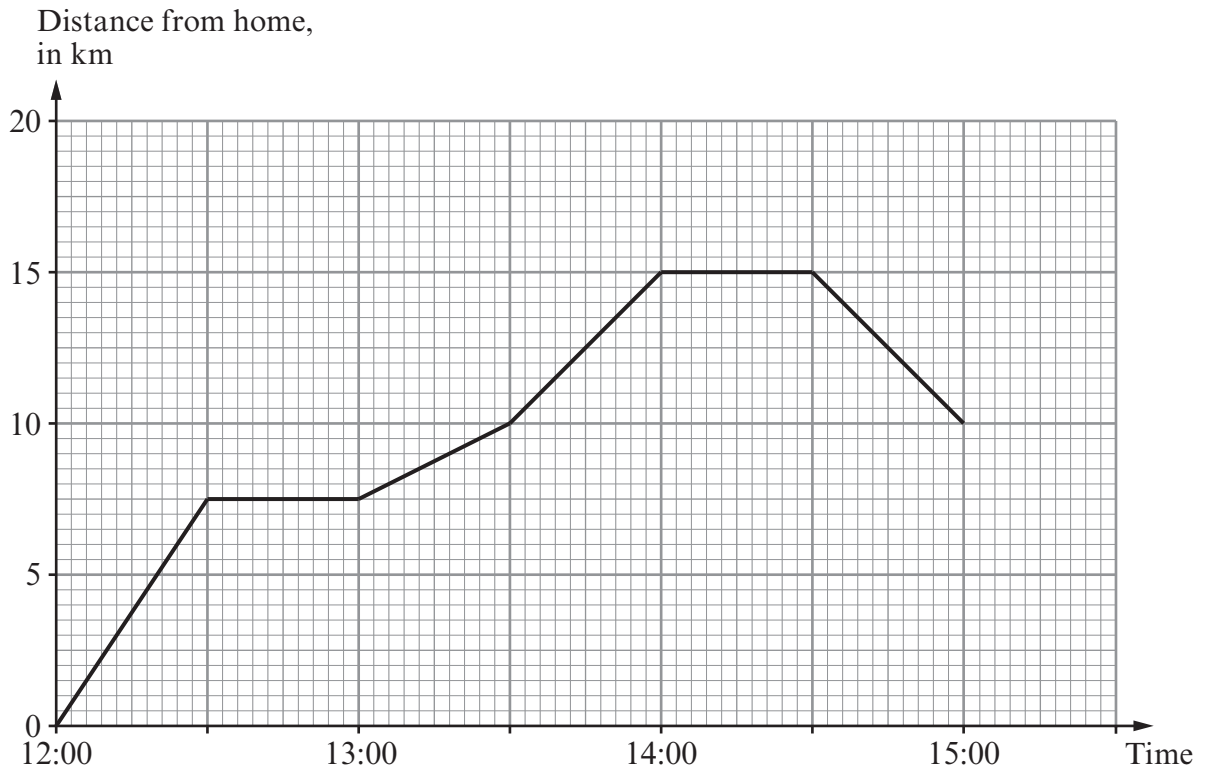
.....

.....

[8]



10. The travel graph below represents Scot's bike ride starting from home.



(a) Between which two times was Scot furthest away from home?

Between and

[1]

(b) Scot started his bike ride at 12:00.
He has a cycle computer that shows the distance he rides.
He had two half-hour rests, but otherwise kept on cycling.
He set his cycle computer to zero when he left home.
What distance did his cycle computer show at 15:00?

.....
.....

[1]

(c) What was Scot's average speed between 13:00 and 13:30?
You must give the units of your answer.

.....
.....
.....

[3]



11. Cerys makes hats for a living.



Each hat she makes needs 0.45 m^2 of fabric costing $\text{\pounds}3.40$ per m^2 and 50cm of ribbon.
Cerys pays herself $\text{\pounds}12.60$ per hour.
She can make 3 hats in two hours.
There are no other costs or outgoings.
Cerys sells each hat for $\text{\pounds}10.25$, which exactly balances the costs and outgoings.

Calculate how much the ribbon costs per metre.
You must show all your working.

.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....

[7]



12. Solve

(a) $6x + 7 = 4(x + 6)$,

.....

.....

.....

.....

.....

.....

[3]

(b) $\frac{x}{5} + 4 = 13$.

.....

.....

.....

.....

[2]



BLANK PAGE

**PLEASE DO NOT WRITE
ON THIS PAGE**



BLANK PAGE

**PLEASE DO NOT WRITE
ON THIS PAGE**

