

Candidate Name	Centre Number					Candidate Number				
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**GCSE****MATHEMATICS - NUMERACY****UNIT 1: NON-CALCULATOR
FOUNDATION TIER****SPECIMEN PAPER SUMMER 2017****1 HOUR 30 MINUTES****ADDITIONAL MATERIALS**

The use of a calculator is not permitted in this examination.
A ruler, protractor and a pair of compasses may be required.

INSTRUCTIONS TO CANDIDATES

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 in this booklet.

Take π as 3.14.

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.

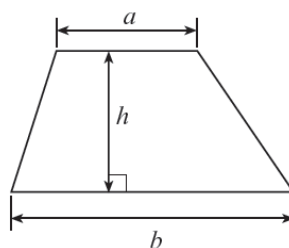
The number of marks is given in brackets at the end of each question or part-question.

The assessment will take into account the quality of your linguistic and mathematical organisation, communication and accuracy in writing in question 3(c).

For Examiner's use only		
Question	Maximum Mark	Mark Awarded
1.	7	
2.	7	
3.	13	
4.	7	
5.	4	
6.	5	
7.	4	
8.	4	
9.	9	
10.	5	
TOTAL	65	

Formula list

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



1. The table below shows the number of athletic medals won by 5 countries in the 2014 Glasgow Commonwealth Games.
One of the entries is missing.

Country		Gold	Silver	Bronze	Total
	AUSTRALIA	8	1	3	12
	SCOTLAND	1	2	1	4
	CANADA	5	2	10	17
	JAMAICA	10	3		19
	WALES	0	2	1	3

- (a) Complete the table to show the number of athletic Bronze medals that were won by Jamaica. [1]

.....

.....

- (b) Draw a pictogram to represent the **Total** number of medals won by each of the 5 countries.
You must decide on an appropriate key, making it clear how many medals each symbol represents. [4]

KEY:

Country		
	AUSTRALIA	
	SCOTLAND	
	CANADA	
	JAMAICA	
	WALES	

- (c) The table below shows the total number of medals Wales won (in all sports) in the 5 Commonwealth Games before 2014.

Year and venue	2010 Delhi	2006 Melbourne	2002 Manchester	1998 Kuala Lumpur	1994 Victoria
Number of medals	19	19	31	15	19

- (i) What is the median of the number of medals won by Wales during these 5 Commonwealth Games?
Circle your answer. [1]

31 2002 16 19 Can't tell

- (ii) What is the range of the number of medals won by Wales over these 5 Commonwealth Games?
Circle your answer. [1]

31 2002 16 19 Can't tell

This image shows a full page of white paper with ten horizontal dashed lines, typical of primary school handwriting practice paper. The lines are evenly spaced and extend across the entire width of the page. There is no text or other markings on the paper.

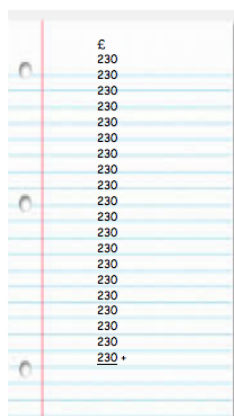
3. The *Hafod Hotel* has 20 bedrooms.

- (a) Andrew is the deputy manager.
He is calculating the cost of buying 20 new single beds.



Single bed £230

Andrew writes out a sum with £230 written 20 times.



Describe a better method that Andrew could use to calculate the cost of 20 beds at £230 each.

Work out the total cost of these 20 beds using your suggested method. [2]

Method:

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Total cost of 20 beds = £.....

- (b) Iona is the hotel manager.
Iona says that 2 single beds are needed for each bedroom, so the hotel needs 40 new single beds not 20.
Describe the quickest way for Andrew to now work out the total cost of the 40 beds.

Write down the total cost of 40 beds. [2]

Method:

.....

.....

Total cost of 40 beds = £.....

A simple wooden table with four legs, shown from a slightly elevated perspective. The table is made of light-colored wood and has a rectangular top. The legs are straight and of equal height. The table is positioned in the lower right area of the page.

Iona has a budget of £3100.
She decides to buy 10 tables and as many chairs as she can afford within her budget.

[9]

[illegible]

4. (a) The *Hafod Hotel* has a small swimming pool for the use of guests. The pool has 4 vertical sides and a rectangular horizontal floor.

The width of the floor of the pool is 10 metres and the length is 20 metres.

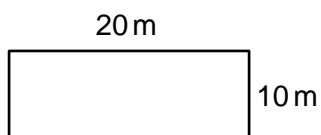


Diagram not drawn to scale

- (i) Sealant is to be applied around the perimeter of the floor of the swimming pool.
What is the perimeter of the floor of the swimming pool?
Circle your answer.

[1]

30 metres

200 metres

60 metres

3000 cm

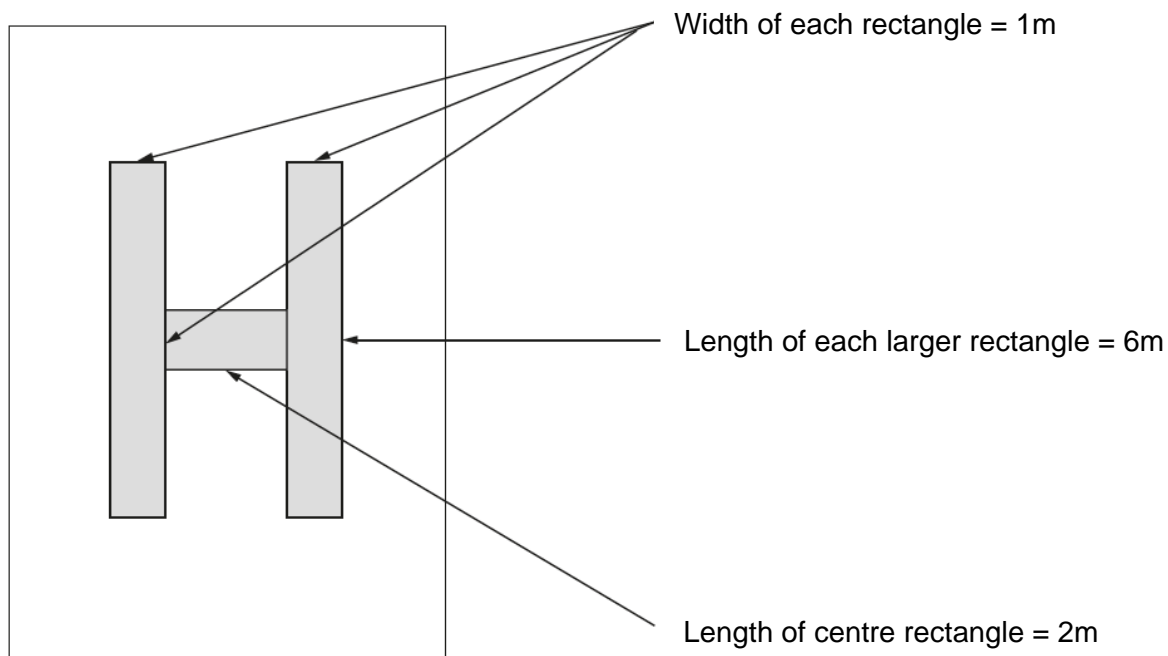
50 metres

- (ii) The floor of the swimming pool is to be painted with a waterproof coating.
Calculate the area of the floor of the swimming pool.

[2]

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- (b) The hotel would like to make the letter H using tiles in the **centre of the floor** of the swimming pool.



A plan is shown below.

Complete the plan by inserting all the missing measurements.

[4]

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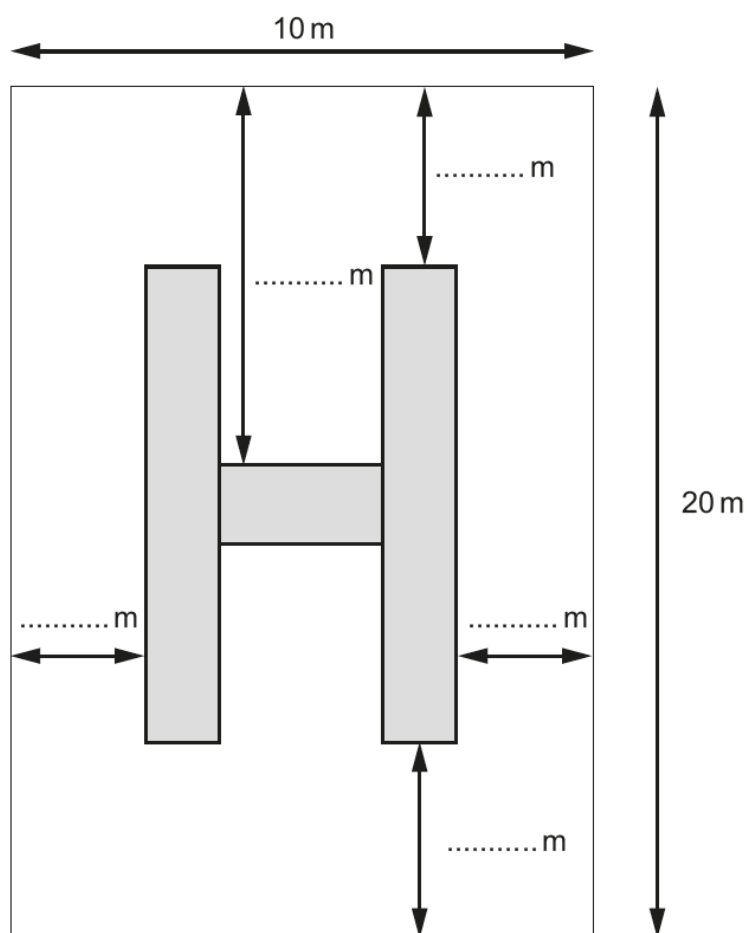


Diagram not drawn to scale

5. Martina walks **650 metres due North**.

She then turns **right through an angle of 37°** and then walks a further **500 metres in a straight line**.

Using a scale of **1cm to represent 100 m**, draw an accurate scale drawing to show the above information.

The starting point is given.

Use your completed drawing to find the actual distance Martina is away from her starting point.

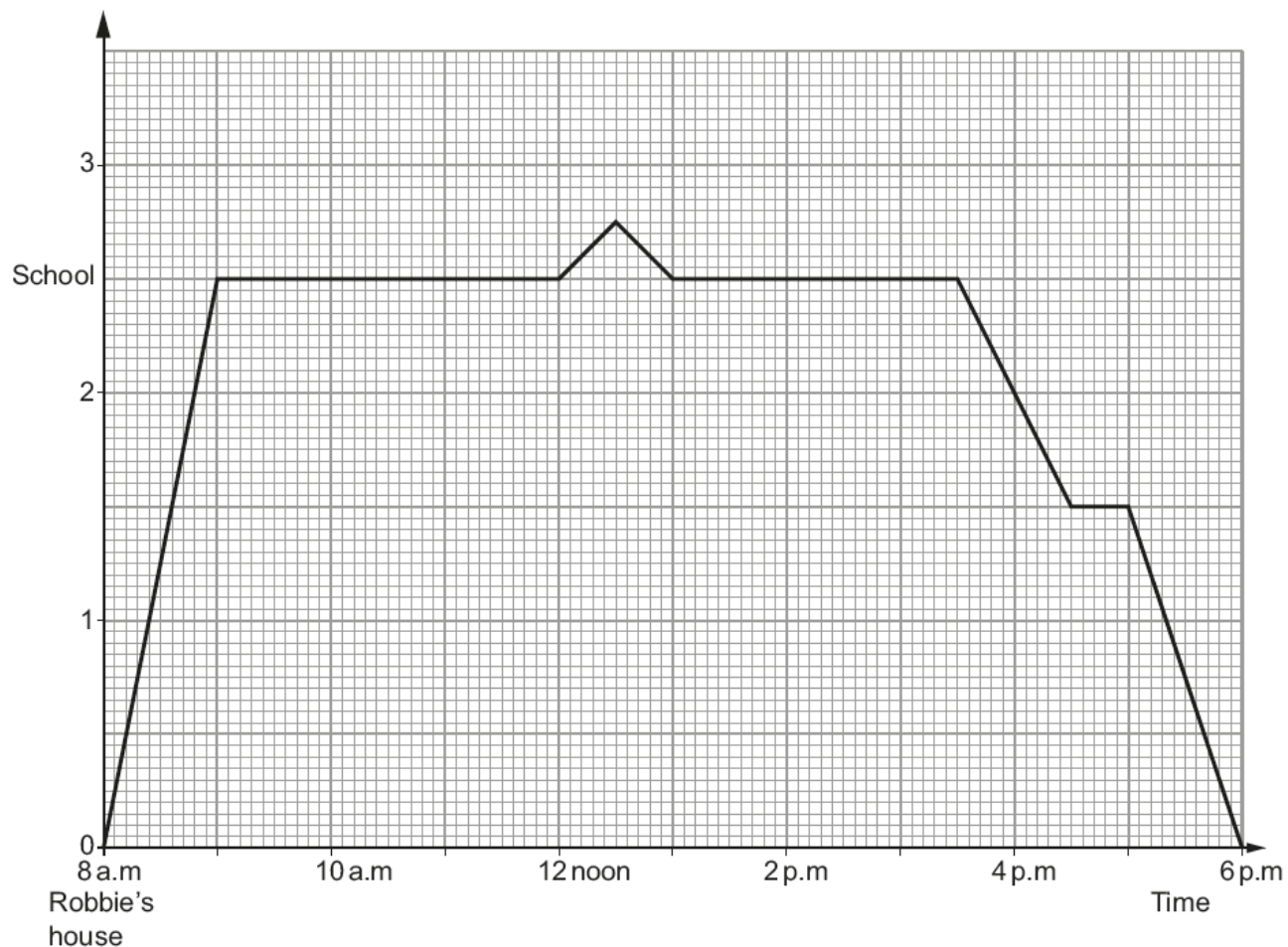
[4]



Actual distance from the starting point =

6. The travel graph below illustrates Robbie's journey to and from school one day.

Distance from Robbie's house (miles)



- (a) (i) At what time did Robbie arrive at school?
Circle your answer.

[1]

8:00 a.m. 8:30 a.m. 3:30 p.m. 8:50 a.m. 9:00 a.m.

- (ii) At what time was Robbie furthest away from his house?
Circle your answer.

[1]

12:15 p.m. 6 p.m. 12:30 p.m. 3:30 p.m. 12 noon

- (iii) Which one of the following statements is correct?
Circle your answer. [1]

A Robbie's average speed was greater between 8 a.m. and 9 a.m. than it was between 5 p.m. and 6 p.m.

B Robbie's average speed was the same between 8 a.m. and 9 a.m. as it was between 5 p.m. and 6 p.m.

C Robbie's average speed was less between 8 a.m. and 9 a.m. than it was between 5 p.m. and 6 p.m.

D It is not possible to tell anything about Robbie's average speed between 8 a.m. and 9 a.m. or between 5 p.m. and 6 p.m. from the information given.

- (b) The travel graph shown is correct.
Robbie is 11 years old and tells his teacher,

'I walked to school, but actually had to run fast for the last 15 minutes to get there on time.'

'I didn't leave the school classroom all day'.

For each of Robbie's statements, decide whether he was telling the truth or not.

You must give a reason for each of your answers below:

- (i) 'I walked to school but I ran for the last 15 minutes.'

Is this true? Put a tick in the box: Yes ☐ No ☐ [1]
Reason:

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- (ii) 'I stayed in the classroom all day.'

Is this true? Put a tick in the box: Yes ☐ No ☐ [1]
Reason:

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8. Hari lives in Chester.
He wanted to catch the ferry to Ireland, leaving Holyhead at 12:05 p.m.
Passengers must board the ferry at least 30 minutes before sailing time.

In planning his journey, he allowed himself 20 minutes to travel from the station at Holyhead to the ferry.

He wanted to catch the latest possible train from Chester to be sure of arriving on board the ferry in time.

Part of the train timetable he used is shown below.

Chester (depart)	07:19	08:55	09:58	10:24
Holyhead (arrival)	09:22	10:35	11:22	12:23

Hari caught the train he wanted, and the train arrived at Holyhead station on time.
The time to travel from the station to the ferry took a total of 25 minutes.

Calculate the total time taken between Hari departing from Chester and arriving at the ferry. [4]

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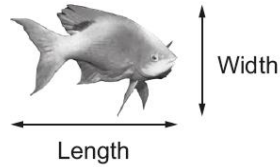
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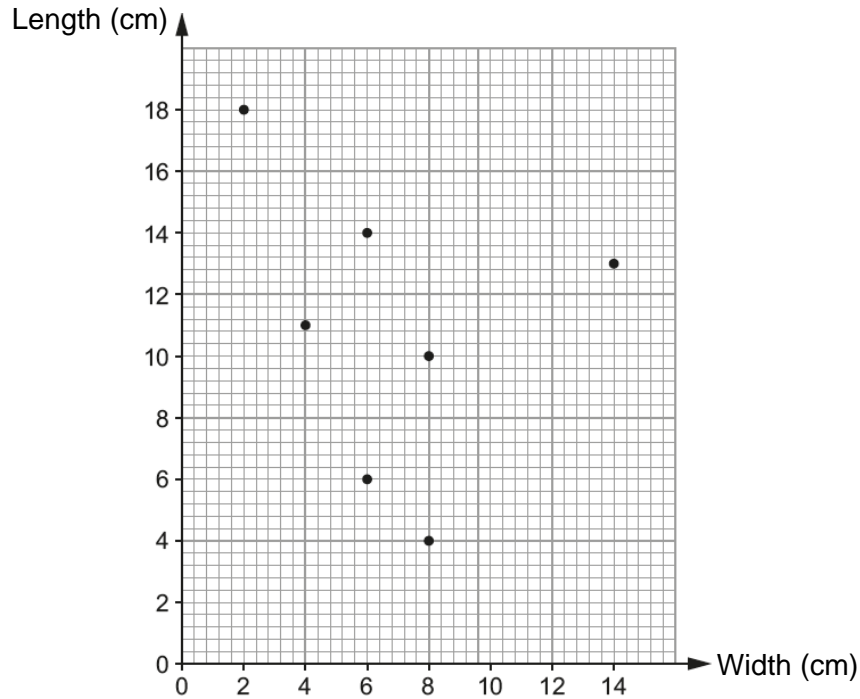
Time taken =

9. Nerys takes her 3 cousins, Ben, Elwyn and Denny, to an aquarium in North Wales.

- (a) Denny records estimates for the length and width of some of the fish he sees at the aquarium.



He draws a scatter diagram as shown below.



- (i) One of the fish is 4 cm wide.
Write down its length. [1]
..... cm
- (ii) Another fish is 14 cm long.
Write down its width. [1]
..... cm
- (iii) The width of a yellow fish is exactly the same as its length.
Indicate on the scatter diagram which point you think represents the yellow fish. [1]

(b)

Remember:
14 pounds = 1 stone
1 kg \approx 2.2 pounds



Nerys sees a very big fish.

She is told it weighs 15 kg.

Nerys herself weighs 9 stone 4 pounds.

Complete the following sentence.

[6]

Nerys weighs approximately times as much as the fish.

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10. 200 visitors to Cardiff completed a questionnaire.

All 200 visitors had visited at least one of the following attractions: Cardiff Castle, the Millennium Stadium and Cardiff Bay.

25 of the visitors had visited Cardiff Castle and the Millennium Stadium and, of these, 15 had visited all three attractions.

91 of the visitors had visited the Millennium Stadium.

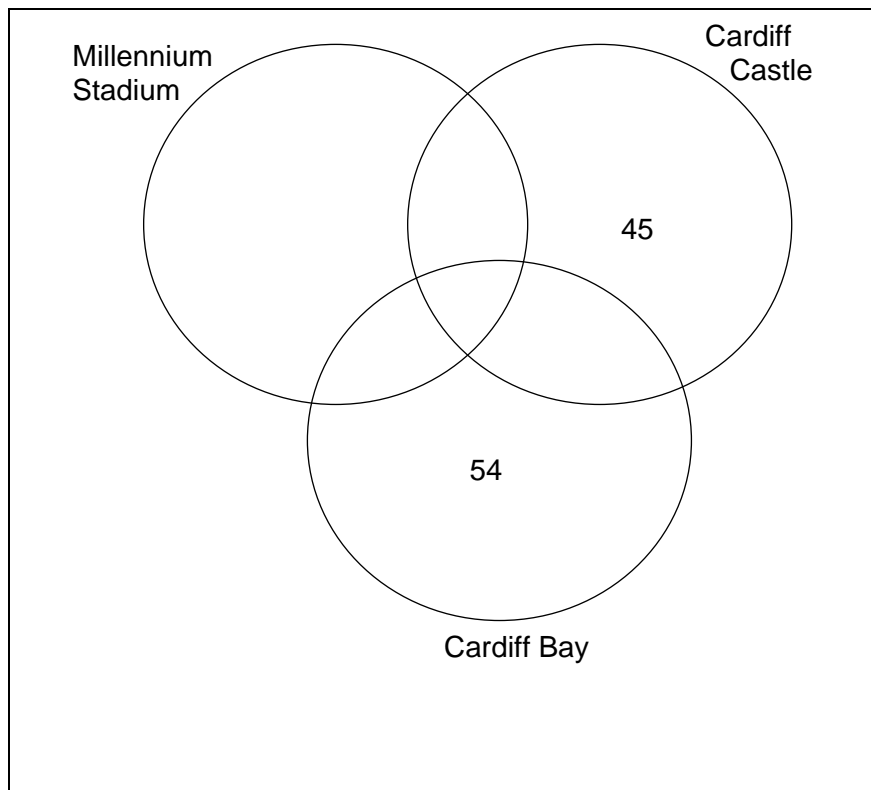
88 had visited Cardiff Castle.

101 had visited Cardiff Bay.

Some further information is given on the Venn diagram below.

How many visitors had visited the Millennium Stadium but not Cardiff Castle or Cardiff Bay?

[5]



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..... visitors had visited the Millennium Stadium but not Cardiff Castle or Cardiff Bay.