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WJEC GCSE

3310U10-1

Mathematics – Numeracy

Unit 1: Non-Calculator

Foundation Tier

Thursday, 8 May 2025 – Morning

1 hour 30 minutes plus your additional time allowance

ADDITIONAL MATERIALS

You must have: Tactile ruler and protractor, pair of compasses and drawing equipment e.g. geometry board, rubber mat, mapping pins, rubber bands, drawing stylus and spur wheel.

ITEMS INCLUDED WITH QUESTION PAPER

- A separate Formula List.
- A separate Diagram Booklet.
- Models for Question 3 (a) and Question 6 (c).

INSTRUCTIONS TO CANDIDATES

- On your paper, write your name, centre number and candidate number.
- Answer ALL the questions on your paper.
- The use of a calculator is NOT permitted in this examination.
- 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.

In question 4, the assessment will take into account the quality of your linguistic and mathematical organisation, communication and accuracy in writing.

1. Dafydd was celebrating his birthday.
He asked his friends to choose one activity.
They could choose cinema, trampolining or bowling.

The table below shows the results.

Cinema	$\frac{3}{10}$ of his friends
Trampolining	20% of his friends
Bowling	$\frac{1}{2}$ of his friends

(a) Dafydd says,
“Cinema is more popular than trampolining.”

Is Dafydd correct?

Choose Yes OR No

Ans: ____

You must show working to support your answer.

Ans: ____ [1 mark]

(b) 15 of Dafydd's friends said they preferred bowling.
How many of Dafydd's friends were there altogether?

Ans: ____ [1 mark]

(c) Dafydd and his friends decide to take the train from Briton Ferry to Cardiff.
Dafydd finds the following information on the internet.

Briton Ferry	Departs	17:31
Cardiff	Arrives	18:19

How many minutes will the journey take?

Ans: ____ [2 marks]

(d) 20 people go bowling on Dafydd's birthday.
The cost is £10.50 per person.

They pay using the following offer.

"Pay full price for 1 person and the second person pays half price."

How much will it cost the 20 people to go bowling using this offer?

Ans: ____ [3 marks]

2. (a) Look at the diagram for Question 2 (a) in the separate Diagram Booklet.
The diagram is a chart.

Local authorities in Wales recycle household waste.
The chart shows the percentages of waste that some local authorities recycled in 2021 and 2022.

(i) How many of these local authorities recycled a greater percentage of waste in 2022 than they recycled in 2021?

Ans: ____ [1 mark]

(ii) In 2022, four of the local authorities recycled 70% or more of their household waste.

Name these four local authorities.

Ans: ____ [2 marks]

(iii) In 2022:

- 65.2% of household waste was recycled in Wales
- 59.7% of household waste was recycled in Caerphilly.

Calculate the difference between these two percentages.

Ans: ____ [2 marks]

(b) Look at the diagram for Question 2 (b) in the separate Diagram Booklet.
The diagram is a bar chart.

The bar chart shows the percentage of waste recycled in the UK in 2020.

Write down TWO things that are wrong with the bar chart.

Ans: 1. ____

Ans: 2. ____

[2 marks]

(c) Look at Diagram 1 for Question 2 (c) in the separate Diagram Booklet.
The diagram is NOT drawn to scale.
Diagram 1 shows a square tile and a rectangular tile.

Kristian tries to recycle as much as possible.
He had some spare square and rectangular tiles, as shown in Diagram 1.

Rather than replace his garden table, Kristian used his spare tiles to tile the top of the table.

Look at Diagram 2 for Question 2 (c) in the separate Diagram Booklet.
The diagram is NOT drawn to scale.
Diagram 2 shows Kristian's tiled table top.

Kristian wants to put a border around the perimeter of the table.
What length of border will he need?

Ans: ____ [3 marks]

3. Ellie wants to decorate her living room.

(a) She sees paint that she likes in her local DIY shop.
The paint is sold in 2-litre tins and 8-litre tins.

Ask for the models for Question 3 (a).
The models are NOT made to scale.
Model X represents the 2-litre tin of paint.
Model Y represents the 8-litre tin of paint.

Tin X costs £9
Tin Y costs £40

(i) Which size tin of paint is the better value?
Choose EITHER 2 litres OR 8 litres
Ans: ____

You must show all your working.
Ans: ____ [2 marks]

(ii) What is the name given to the 3D shape that best represents the tins of paint.
Choose your answer from the following list.

R = Sphere

S = Cylinder

T = Cube

U = Cone

V = Cuboid

Ans: ____ [1 mark]

(b) Ellie pays a decorator to paint her living room.
The decorator uses the formula below to calculate the total cost.

$$\text{Total cost} = \text{£}30 \times \text{number of hours} + \text{£}45$$

The decorator takes 7 hours to paint Ellie's living room.
How much does Ellie pay?

Ans: ____ [2 marks]

4. IN THIS QUESTION, YOU WILL BE ASSESSED ON THE QUALITY OF YOUR ORGANISATION, COMMUNICATION AND ACCURACY IN WRITING.

Angharad has a food truck.
She sells hotdogs at festivals.
Each hotdog consists of a bread roll and a sausage.

The table below shows her costs for the festival last month.

Fees paid to the festival organiser	£450
Bread rolls	£1.50 for 6 bread rolls
Sausages	£4 for 10 sausages

Angharad bought enough bread rolls and sausages to make 300 hotdogs.
She sold all the hotdogs for £5 each.

What was Angharad's total profit?
You must show all your working.

Ans: ____ [8 marks + 2 marks OCW]

5. Look at the diagram for Question 5 in the separate Diagram Booklet.
The diagram shows a conversion graph for furlongs and yards.

Furlongs and yards are both measures of length.

In the past, these measures were used in farming.

The conversion graph can be used to convert between furlongs and yards.

Complete each of the following statements.

(a) 330 yards is equal to ____ furlongs.

Ans: ____ [1 mark]

(b) 7 furlongs is equal to ____ yards.

Ans: ____ [2 marks]

(c) 1320 yards is equal to ____ furlongs.

Ans: ____ [2 marks]

6. Viktor is a farmer.

(a) Viktor wants to buy some animal feed for his sheep.

He can EITHER buy a bag of Sean Sheep Mix OR a bag of Rugged Sheep Mix.

SEAN SHEEP MIX (20 kg bag)

Was £14 Now 15% off

RUGGED SHEEP MIX (20 kg bag)

Was £24 Now $\frac{5}{8}$ off

Which of these two animal feeds is cheaper and by how much?

Ans: ____ Sheep Mix is cheaper

Ans: It is cheaper by £ ____

[5 marks]

(b) Viktor sells butter and ice cream in his farm shop.
He sells his butter in 250 g packets. Each packet costs £3.25

Sioned buys 500 g of butter and 1.5 litres of ice cream.
She pays a total of £18.50 for the butter and the ice cream.

Calculate the cost of 1 litre of ice cream.

Ans: 1 litre of ice cream costs £___ [4 marks]

(c) Ask for the model for Question 6 (c).

The model is NOT made to scale.

The model represents a water trough.

Viktor orders a new water trough for his cows.

It is in the shape of a cuboid.

The internal measurements are:

length 4 m, width 0.5 m and height 0.8 m.

Calculate the capacity of the new water trough in m^3

Ans: Capacity is ___ m^3 [2 marks]

7. Look at the diagram for Question 7 in the separate Diagram Booklet.

The diagram is a pie chart.

The pie chart is accurately drawn.

Ralph completed a survey.

He asked people to describe where they live.

Ralph's results are shown on the **diagram**.

In Ralph's survey, 480 people answered 'Town or city'.

Calculate the number of people who answered 'Seaside' in Ralph's survey.

Ans: ___ [3 marks]

8. A survey was carried out to find how many books children read during the holidays.

The following two questions were asked in a questionnaire.

Q1. Most children read lots of books.

Do you read lots of books? ____

Q2. How many books do you read during the holidays?

None

1–10 books

10–20 books

More than 20 books

(a) (i) Give ONE reason why Q1 was NOT a suitable question.

Ans: ____ [1 mark]

(ii) Give ONE reason why Q2 was NOT a suitable question.

Ans: ____ [1 mark]

(b) The survey was carried out by asking children as they left the library on a Saturday morning.

Give ONE criticism of how the survey was carried out.

Ans: ____ [1 mark]

9. On a flight to Spain, the cabin crew started serving drinks to passengers at 11:00 a.m.

The flight manager recorded the length of time each passenger had to wait to be served.

Look at the diagram for Question 9 in the separate Diagram Booklet.

The diagram is a frequency diagram.

The flight manager has drawn **this** frequency diagram to display her findings. She used groups of width 10 minutes:

$0 \leq \text{time} < 10$, $0 \leq \text{time} < 20$, and so on.

(a) How many passengers waited less than 10 minutes to be served?

Ans: ____ [1 mark]

(b) How many passengers were on this flight to Spain?

Ans: ____ [2 marks]

(c) What fraction of the total number of passengers had to wait 40 minutes or more to be served a drink?

Express your answer in its simplest form.

Ans: ____ [2 marks]

(d) What is the modal group of these recorded times?

Ans: ____ [1 mark]

(e) The flight manager says,

“Consider the passengers who waited between 30 minutes and 40 minutes to be served.

If 12 of these passengers had been served 10 minutes faster, the modal group would have been different.”

Is the flight manager correct?

Choose Yes OR No

Ans: ____

Give a reason for your answer.

Ans: ____ [1 mark]

10. Ewan keeps bees and sells jars of honey.

He buys two different sizes of jar for the honey.

- An empty small jar costs 12p and can hold 200 ml of honey.
- An empty large jar costs 20p and can hold 500 ml of honey.

Ewan works out how much to charge for each jar of honey, by:

- calculating the cost of the honey in the jar
- adding on the amount he paid for the jar.

For both sizes of jar, Ewan charges the SAME PRICE PER 100 ml for the honey itself.

Ewan charges his customers £3.40 for a 500 ml jar of honey.
This price is for the honey and the jar.

How much should Ewan charge for a 200 ml jar of honey?

You must show all your working.

Ans: ____ [4 marks]

TOTAL 65 MARKS

END OF PAPER
