Name	Date started	Target end date

WJEC GCSE Mathematics and Numeracy (Double Award) — Question Pack

Household bills and budgeting: reading meters, applying unit and standing charges, and balancing a simple budget. Sourced from legacy WJEC GCSE Mathem

REVISE
.wales

F1.04 — Bills, budgeting & bank statements

Spec 1.8.2 — Unit 1 (calculator allowed)

Household bills and budgeting: reading meters, applying unit and standing charges, and balancing a simple budget. Sourced from legacy WJEC GCSE Mathematics-Numeracy Foundation papers (3300U10/U20) and accessible content from Intermediate papers (3300U30/U40), organised for revision under the 2025 spec.

2025 SPECIFICATION

Estimated time for entire question pack: ~40 minutes

*Derived from the GCSE Higher pace of **~1.5 min/mark** (27 marks across 7 questions).*

*You are advised to **not** attempt to complete all of this in one sitting.*

ABOUT THIS QUESTION PACK

This is a **focused single-topic practice pack**, not a single mock paper. Questions are organised against the 2025 specification. Questions are ordered chronologically by sitting, with custom-written and SAM questions at the end.

INSTRUCTIONS

Use black ink or black ball-point pen. Show all working — method marks are awarded for clear setup.

A calculator is allowed on every question in this pack (Unit 1 is the calculator-allowed paper).

Bills, budgeting & bank statements — what the new spec asks

WJEC GCSE Mathematics (first teaching 2025) · Unit 1: calculator-allowed.

Reading bills 1.8.2

- Identify standing charge vs unit rate on a utility bill.
- Convert between kWh and money values.
- Apply VAT to the bill total where required.

Meter readings 1.8.2

- Calculate units used from two meter readings.
- Combine unit cost with standing charge.
- Estimate quarterly or annual bills from a sample.

Budgeting 1.8.2

- List income and outgoings to find balance.
- Identify whether a budget is in surplus or deficit.
- Suggest changes to balance an over-budget plan.

Bank statements 1.8.2

- Read credits, debits and running balance from a statement.
- Identify the highest and lowest balance in a period.
- Cross-check statement totals against bills.

Crib sheet »

Bills, budgeting & bank statements in one page

Quick-reference notes — revisit before each question. Don't use during the questions.

Meter readings

$$\text{units used} = \text{current reading} - \text{previous reading}$$

Always do current minus previous, not the other way around.

Utility bill

$$\text{cost} = \text{units} \times \text{unit rate} + \text{standing charge}$$

Standing charge is paid daily even if you use zero units.

Tariffs comparison

Work out the **total cost** on each tariff for the same usage.

Cheapest unit rate isn't always cheapest overall — standing charge matters.

Budget

$$\text{balance} = \text{income} - \text{outgoings}$$

Positive = saving. Negative = overspending.

Bank statement

Credits (in) increase the balance; debits (out) reduce it.

Running balance = previous balance + credits − debits.

Common traps

- Forgetting the standing charge.
- Subtracting current from previous (negative units).
- Mixing up credits and debits.

Examiner only

(iii) There are two flowers that each have 19 leaves.
Calculate the difference in the heights of these two flowers.
You must show all your working. [2]

Difference in the heights is ..... cm

(iv) Calculate the percentage of the flowers that have **fewer than 23 leaves**. [2]

..... % of the flowers have **fewer than 23 leaves**.

5. (a) Malik has two orchards.
He has apple trees and pear trees in his north orchard.
He has pear trees and cherry trees in his west orchard.

In the north orchard,
- Malik has a total of 35 trees
- number of apple trees : number of pear trees = 4 : 3.

In the west orchard,
- Malik has twice as many **pear** trees as he has **pear** trees in the north orchard
- number of pear trees : number of cherry trees = 5 : 11.

How many **cherry** trees does Malik have?
You must show all your working. [5]

Examiner only

(b) Malik's crop of apples this year has a total mass of 5280 pounds.
He makes apple juice from $\frac{1}{6}$ of the mass of his apple crop.
Malik makes 2 litres of apple juice from every 5 kg of apples.

Calculate the number of litres of apple juice Malik makes. [6]

Examiner only

(c) Malik makes cherry jam using some of the fruit from his trees.

(i) He makes and sells 200 jars of cherry jam.

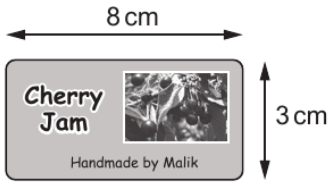
It costs him £94 for all the ingredients to make the jam.
Malik pays 23p for each jam jar he uses.
He sells each jar of jam for £1.60.

Calculate the profit Malik makes from selling his 200 jars of jam. [5]

(ii) Malik makes a poster to advertise his jam.
He also makes labels for the jars.
The poster and the labels are mathematically similar.

Poster

Jam jar label

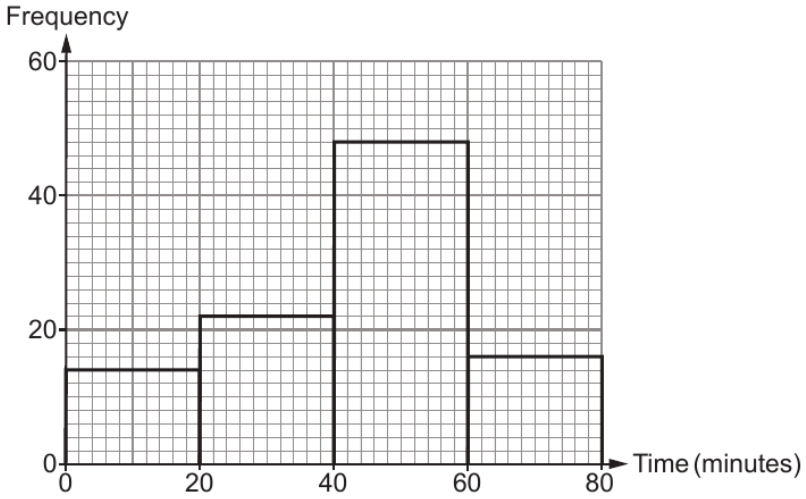


Diagrams not drawn to scale

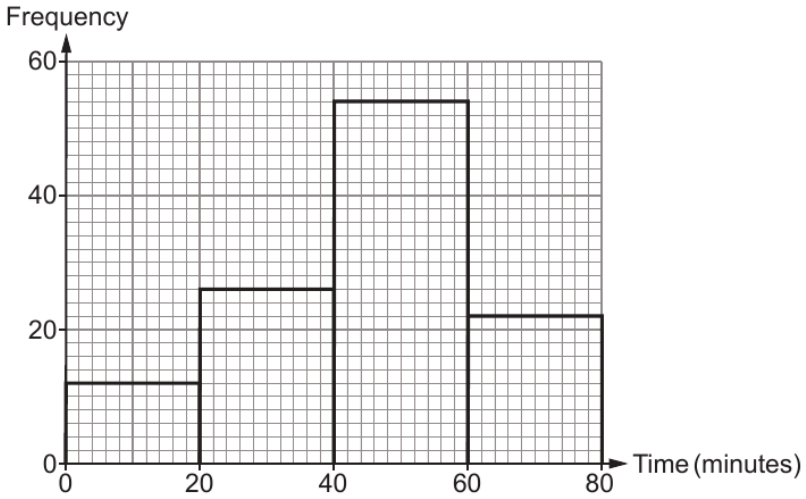
Calculate the height of the poster. [2]

6. The frequency diagrams below show the lengths of time that men and women spent training in the gym on Friday.

Time spent training – Men



Time spent training – Women



Examiner only

(a) Freddie says he spent exactly 1 hour 25 minutes training in the gym on Friday.
Explain how you know that Freddie is not telling the truth. [1]

(b) How many men spent less than 20 minutes training in the gym on Friday?
Circle your answer. [1]

12 14 54 6 20

(c) How many women spent less than 40 minutes training in the gym on Friday?
Circle your answer. [1]

14 26 34 38 76

(d) Gwen says,

"A greater **proportion** of women than men spent between 40 and 60 minutes training in the gym on Friday."

Is Gwen's statement true or false?

True ☐ False ☐

You must show all your working to support your answer. [5]

Examiner only

4. (a) Billy thinks of a number.
Billy halves his number.
His answer is 58.

What number did Billy think of? [1]

(b) Siân thinks of a different number.
Siân squares her number.
Her answer is 9.

What number did Siân think of? [1]

(c) Calculate 40% of 120. [2]

5. (a) Which of the following is equal to 0·5 kg?
Circle the correct answer. [1]

50 mg 500 g 500 mg 5 mg 50 g

(b) Which of the following is equal to 700 cm?
Circle the correct answer. [1]

7 m 7 km 0·7 m 0·07 km 70 m

Examiner only

6. Miss Jardon's electricity bill is shown below.
Complete the bill to find the total amount that Miss Jardon owes. [7]

Miss Jardon
34 Heol Ysbyty

Period	Previous meter reading	Present meter reading	Number of units of electricity used
July, August and September 2023	68928	69658	.....

Charge for electricity: ..... units at **£0.19 per unit**	£ .....
Standing charge: 3 months at **£6.50 per month**	£ .....
Total charges:	£ .....
VAT at 5%:	£ .....

Amount due to pay £ .....

Examiner only

7. Jac is planning to visit the Empire State Building in New York.

(a) According to the internet, the Empire State Building has a total of 1172 miles of elevator cable.

Complete the following statement. [2]

There is a total of ..... **km** of elevator cable in the Empire State Building.

(b) The elevators in the Empire State Building were designed to move at a rate of 0·366 kilometres per minute.

Complete the following statement. [2]

The elevators in the Empire State Building were designed to move at ..... **metres per second.**

(c) Planners had an original budget of $60 million to construct the Empire State Building. It actually cost $41 000 000 to construct.

Complete the following statement.
Give your answer correct to 2 decimal places. [3]

Constructing the Empire State Building cost ..... % less than the original budget.

Examiner only

(d) More than 4 million people visit the Empire State Building each year.
What is 4 million written in standard form?
Circle your answer. [1]

4×10^{-5} $0\cdot4\times10^{5}$ 4×10^{5} 4×10^{6} 4×10^{7}

(e) The conversion rate at the exchange shop is £1 = $1.25.
The exchange shop only has $10 notes and $50 notes.

Jac has exactly £350.
He wants to exchange as close to £350 as possible for US dollars ($).
He asks for as **few** notes as possible.

Calculate:
- how many $10 notes and how many $50 notes Jac gets
- how much he pays for his currency.

You must show all your working. [6]

Examiner only

7. (a) Steffan uses 654 kWh of electricity in a three-month period.

Electricity costs £0.30 per kWh.
The standing charge for the three-month period is £54.
Steffan has to pay VAT at 5% on the **total** cost.

Calculate Steffan's electricity bill.
You must show all your working. [5]

(b) Steffan always leaves his fridge-freezer turned on.
His fridge-freezer uses electricity costing £2.31 per week.
Electricity costs £0.30 per kWh.
Calculate the number of kWh of electricity Steffan's fridge-freezer uses **per day**.
You must show all your working. [3]

Examiner only

(c) Steffan is thinking of buying the fridge-freezer shown below.

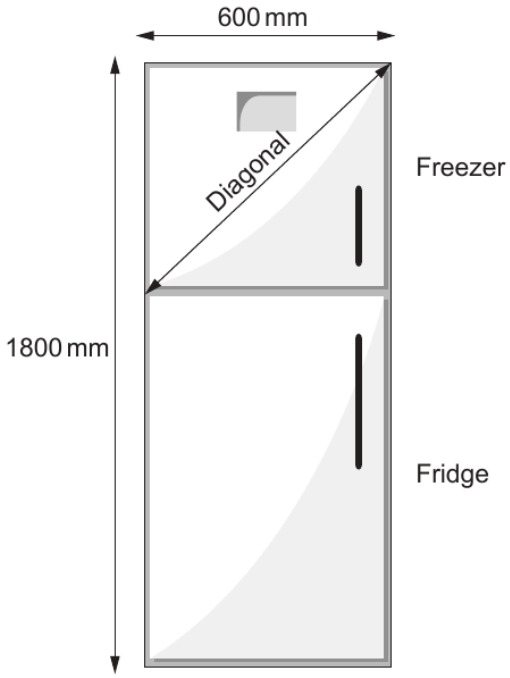


Diagram not drawn to scale

Steffan needs to check that the **freezer** compartment of this fridge-freezer has enough room.

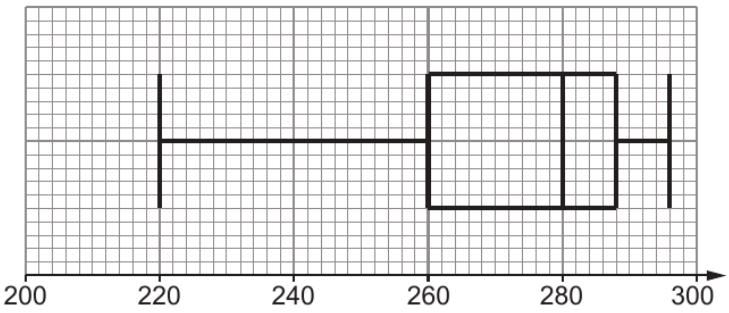
The height of the freezer door is $\frac{2}{5}$ of the total height of the fridge-freezer.

Calculate the length of the **diagonal** of the freezer door.
Give your answer in millimetres.
You must show all your working. [5]

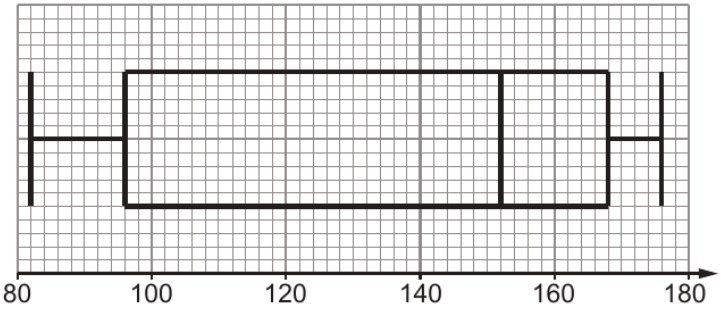
11. Geraint has collected data on some adult gulls.
He weighed 400 slender-billed gulls, 400 little gulls, and 400 black-headed gulls.

He has constructed box-and-whisker diagrams to display the masses of the gulls.

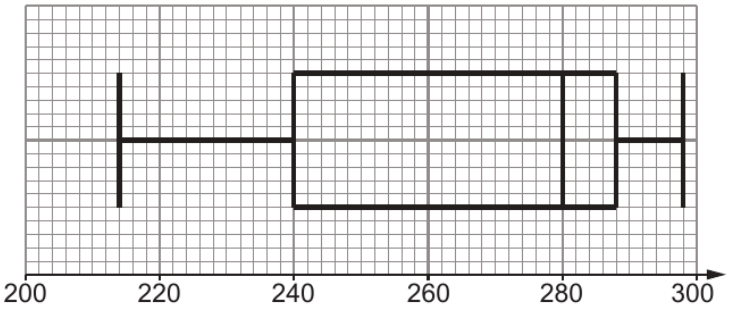
Slender-billed gulls



Little gulls



Black-headed gulls



Examiner only

(a) What is the range of the masses of the slender-billed gulls? [1]

.....

Range of the masses ..... g

(b) How many of the little gulls have a mass greater than or equal to 96 g? [2]

.....

.....

.....

(c) Write down the percentage of little gulls that have a mass greater than or equal to 168 g. [1]

..... %

(d) From the box-and-whisker diagrams, Geraint notices that two of the types of gull have the same median mass.
He makes the following statement about these two types of gull.

"The diagrams suggest that one of these two types of gull generally has a greater mass than the other."

(i) Which type of gull appears to have the greater mass? [1]

.....

(ii) Geraint based his statement on **one** of the following measures.
Which measure did Geraint use?
Circle your answer. [1]

Range Median Lowest mass Lower quartile Upper quartile