Name	Date started	Target end date

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

Wages, salaries, payslips and income tax. Sourced from legacy WJEC GCSE Mathematics-Numeracy Higher papers, organised for revision under the 2025 spec

REVISE
.wales

1.02 — Wages, salaries, payslips & income tax

Spec 1.8.5 — Unit 1 (calculator allowed)

Wages, salaries, payslips and income tax. Sourced from legacy WJEC GCSE Mathematics-Numeracy Higher papers, organised for revision under the 2025 spec.

2025 SPECIFICATION

Estimated time for entire question pack: ~26 minutes

*Derived from the GCSE Higher pace of **~1.5 min/mark** (17 marks across 3 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).

Wages, salaries, payslips & income tax — what the new spec asks

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

Income tax 1.8.5

- Subtract the *personal allowance* before taxing.
- Stepped: each band of taxable income is taxed at its own rate.
- Sum the tax due in each band — never apply one rate to the whole income.

Payslips 1.8.5

- Gross pay − income tax − National Insurance = net pay.
- Look for items like pension contributions and student loan deductions.
- Annual salary ÷ 12 = monthly gross.

Averages from grouped data 2.6

- Median from a frequency table: identify the modal/median group.
- Estimated mean: $\sum(fx)/\sum f$ using midpoints.
- Estimates — not exact — because original values are lost in grouping.

Land Transaction Tax (Wales) 1.8.5

- Stepped scale: each £-band has its own % rate.
- Calculate tax for each band, then sum — analogous to income tax.
- Be careful with boundary prices — the rate applies *above* each threshold.

Crib sheet »

Wages, salaries, payslips & income tax in one page

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

Income tax bands

Tax-free up to a *personal allowance* threshold.

Above that, tax at the *basic rate*; higher earners pay more on a portion.

Always subtract the allowance first.

Worked example

Earn £30 000, allowance £12 570, basic rate 20%.

Taxable = 30 000 − 12 570 = £17 430.

Tax due = 0.20 × 17 430 = £3 486.

Estimating averages

Median wage from grouped data: identify the group containing the middle person.

Estimate the mean by using midpoints of each group times frequency, summed and divided by total.

Land Transaction Tax

Stepped tax: each £-band is taxed at its own rate.

Add the tax due in each band — don't apply one rate to the whole price.

Salaries vs wages

Salary: annual amount divided by 12 monthly payments.

Wage: hours × hourly rate, often weekly.

Watch for overtime at 1.5× or 2× the rate.

Common traps

- Forgetting the personal allowance.
- Applying the top rate to total income.
- Annual vs monthly mismatch.

Examiner only

5. *(a)* *Kenworth Electrical* specialises in wiring new houses.
The monthly wages of all *Kenworth Electrical* employees are summarised in the frequency table below.

Monthly wage, £x	Frequency
$1800 \leqslant x < 2000$	64
$2000 \leqslant x < 2100$	50
$2100 \leqslant x < 2400$	2
$2400 \leqslant x < 5800$	0
$5800 \leqslant x < 7800$	4

(i) In which group does the median monthly wage lie?
Circle your answer. [1]

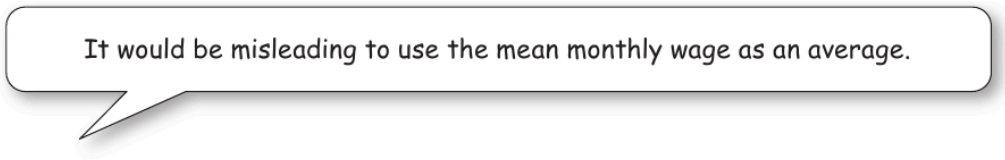
$1800 \leqslant x < 2000$ $2000 \leqslant x < 2100$ $2100 \leqslant x < 2400$

$2400 \leqslant x < 5800$ $5800 \leqslant x < 7800$

.....

(ii) Alysia is an accountant working for *Kenworth Electrical*.
She knows the exact wage of each employee.

Alysia says,



Explain why Alysia has reached this conclusion. [1]

.....

.....

.....

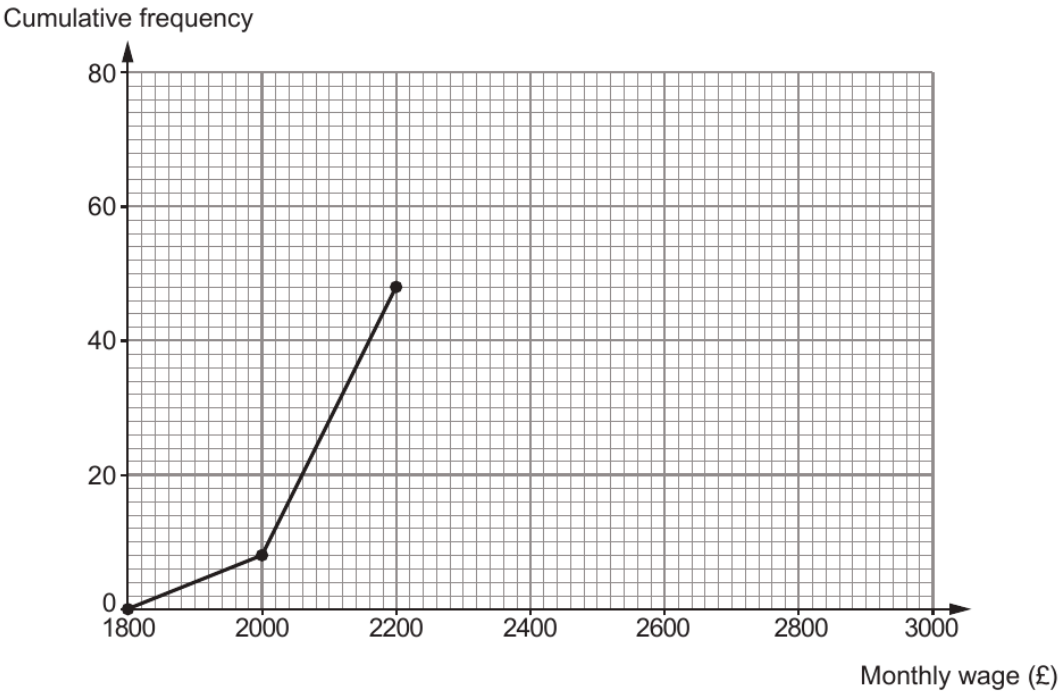
3310U601
11

Examiner only

(b) *Maesteg Electrical* also specialises in wiring new houses.
The monthly wages of all *Maesteg Electrical* employees are summarised in the frequency table below.

Monthly wage, £x	Frequency
$1800 \leqslant x < 2000$	8
$2000 \leqslant x < 2200$	40
$2200 \leqslant x < 2400$	24
$2400 \leqslant x < 3000$	8

(i) Use the frequency table to complete the following cumulative frequency diagram to display the monthly wages of all *Maesteg Electrical* employees. [2]



Use the cumulative frequency diagram to answer each of the following questions.

(ii) Which of the following is the best estimate for the median monthly wage of *Maesteg Electrical* employees?
Circle your answer. [1]

£2100 £2160 £2200 £2360 £3000

.....

.....

Examiner only

(iii) Calculate an estimate of the percentage of *Maesteg Electrical* employees who have a monthly wage of less than £2050.
You must show all your working. [2]

.....

.....

.....

Examiner only

10. Holly wants to buy a new house in Cardiff.
She knows that Land Transaction Tax will be added to the price of the house.

Land Transaction Tax rates are shown below:

- pay nothing on the first £180 000 of the price of the house,
- pay 3·5% on the part of the price of the house that is above £180 000 and up to and including £250 000,
- pay 5% on the part of the price of the house that is above £250 000 and up to and including £400 000.

(a) Show that the Land Transaction Tax payable on a house costing £255 000 is £2700. [2]

(b) The most Holly can afford to spend, including Land Transaction Tax, is £327 000.

Let x be the highest price of house that Holly can afford.
Write an equation in x and solve it to calculate the highest price of house that Holly can afford. [5]

END OF PAPER

Examiner only

3. Jamal is paid in dollars.
The income tax rates are as follows:

Band	Taxable income	Tax rate
Personal allowance	Up to 10 000 dollars	0%
Basic rate	10 000 dollars to 30 000 dollars	10%
Higher rate	Over 30 000 dollars	25%

Jamal's total earnings before tax are 36 000 dollars.

Calculate how much tax Jamal is due to pay in total.
You must show all your working. [6]