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# Level 3 Certificate

# MATHEMATICAL STUDIES

Paper 1

June 2023

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## Preliminary Material

To be opened and issued to candidates on  
Wednesday 1 March 2023 or as soon as possible after that date.

### REMINDER TO CANDIDATES

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## Income Tax and National Insurance 2022–2023

### Income tax 2022–2023

Most people in the UK have a personal allowance. This is their annual amount of tax-free income. The standard personal allowance for 2022–2023 is £12 570

The rates of income tax you pay depend on how much income you have **above** your personal allowance.

### Income tax rates and taxable bands 2022–2023

Income after allowances	Income tax rate
up to £37 700	20%
over £37 700 and up to £150 000	40%
above £150 000	45%

### To calculate your income tax

Find your taxable income by subtracting your personal allowance from your annual gross income.

You pay income tax at 20% on the first £37 700 of your taxable income.

You pay income tax at 40% on your taxable income over £37 700 up to £150 000

You pay income tax at 45% on your taxable income over £150 000

## National Insurance (NI) 2022–2023

Percentage NI due	Minimum monthly income	Maximum monthly income	Minimum yearly income	Maximum yearly income
0%		up to £1048		£12570
13.25%	£1048	£4189	£12570	£50270
3.25%	above £4189		above £50270	

### Examples

A person who had a monthly income of £1800 paid 13.25% on the amount above £1048

A person who had a yearly income of £62000 paid 13.25% on the amount between £12570 and £50270 plus 3.25% of the amount above £50270

## Student Loans

### Student loan repayment

If you have a student loan you make repayments when your gross income is greater than the threshold.

You pay 9% of the amount of your income which is above the threshold.

The threshold depends upon when you started university.

Started university	Threshold at 1 September 2020
Before 1/9/2012	£19895
On or after 1/9/2012	£27295

You can make additional payments at any time if you want to repay your student loan more quickly.

All payments are made to the Student Loan Company (SLC).

Turn over ►

## Christmas Trees

In the past, the majority of households in the UK bought artificial Christmas trees and often kept them for years. Nowadays, real Christmas trees are becoming more popular, with many sustainable Christmas tree farms producing trees in the UK. A real tree has a lower carbon footprint and many people like the fresh smell of a pine or fir tree.

The table shows the estimated number of real Christmas trees sold in the UK from 2019 to 2022

Year	Number of trees (millions)
2019	7.05
2020	7.18
2021	7.42
2022	7.66

Sales are increasing each year and this trend is expected to continue as people try to reduce their carbon footprint.

The most popular Christmas tree in the UK is the Nordmann fir, which accounts for between 70% and 85% of all real Christmas tree sales each year.

The Nordmann fir is more slow-growing than the Norway spruce or fir. A Nordmann fir usually takes ten years to reach a height of 6 feet, which is the most popular height for most households' Christmas tree.

Trees can be bought directly from Christmas tree farms and these farms or forests provide trees to shops as well. Trees cut down are replaced with new seedlings to ensure trees are available in the future.

### Christmas tree planting

Spacing is one of the most important issues when planting seedlings. The basic guidance for most Christmas trees is that they should be planted in rows 8 feet apart. Within each row, seedlings should be planted between 4 feet and 5 feet apart. Proper spacing is essential to decrease the chance of disease and pest issues.

## END OF PRELIMINARY MATERIAL

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