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# Level 3 Certificate

# MATHEMATICAL STUDIES

Paper 1

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## Preliminary Material

### Instructions

- This preliminary material will be given to you on or after 1 March.
- **You must not take preliminary materials or any associated material into the examination room. A clean copy will be made available.**

### Information

- The Preliminary Material is to be seen by teachers and candidates **only**, for use during preparation for the examination on (DATE). It **cannot** be used by anyone else for any other purpose, other than as stated in the instructions issued, until after the examination date has passed. It must **not** be provided to third parties.

## Taxation 2013 – 2014

### National Insurance 2013 – 2014

| Percentage National Insurance Due | Minimum Weekly Income | Maximum Weekly Income | Minimum Monthly Income | Maximum Monthly Income |
|-----------------------------------|-----------------------|-----------------------|------------------------|------------------------|
| <b>Non-contracted out</b>         |                       |                       |                        |                        |
| Nil                               |                       | below £109            |                        | below £473             |
| 0%                                | £109                  | £149                  | £473                   | £646                   |
| 12%                               | £149.01               | £797                  | £646.01                | £3454                  |
| 2%                                | above £797            |                       | above £3454            |                        |
| <b>Contracted out</b>             |                       |                       |                        |                        |
| 10.6%                             | £149.01               | £770                  | £646                   | £3337                  |

Note: A person is '**contracted out**' if they are a member of a contracted out occupational pension scheme or personal/stakeholder pension. They pay a slightly lower rate of National Insurance as the state does not have to pay them as much pension.

A person with a weekly income of, say, £250 a week will pay 12% on the amount above £149

A person having a weekly income of, say, £850 will pay 12% on the amount between £149.01 and £797 plus 2% of the amount above £797

## Income tax 2013 – 14

Most people have a personal allowance. This is an annual amount of tax-free income. The personal allowance for 2013–2014 was £9440 . The rates of income tax you pay depend on how much taxable income you have above your personal allowance.

### Income tax rates and taxable bands 2013 – 2014

| Rate            | Taxable Income     |
|-----------------|--------------------|
| Basic: 20%      | £0 – £32 010       |
| Higher: 40%     | £32 011 – £150 000 |
| Additional: 45% | Over £150 000      |

### To calculate your income tax if your annual income is £100 000 or less

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

You pay income tax at 20% on the first £32 010 of your taxable income.

You pay income tax at 40% on your taxable income over £32 010

### Student Loans

Student loans are paid back at a rate of 9% of gross earnings in excess of £16 365 per year.

### Net pay

Your net pay or take-home pay is the money you earn after any deductions for income tax, National Insurance and student loan repayments.

**Turn over**

## Waste

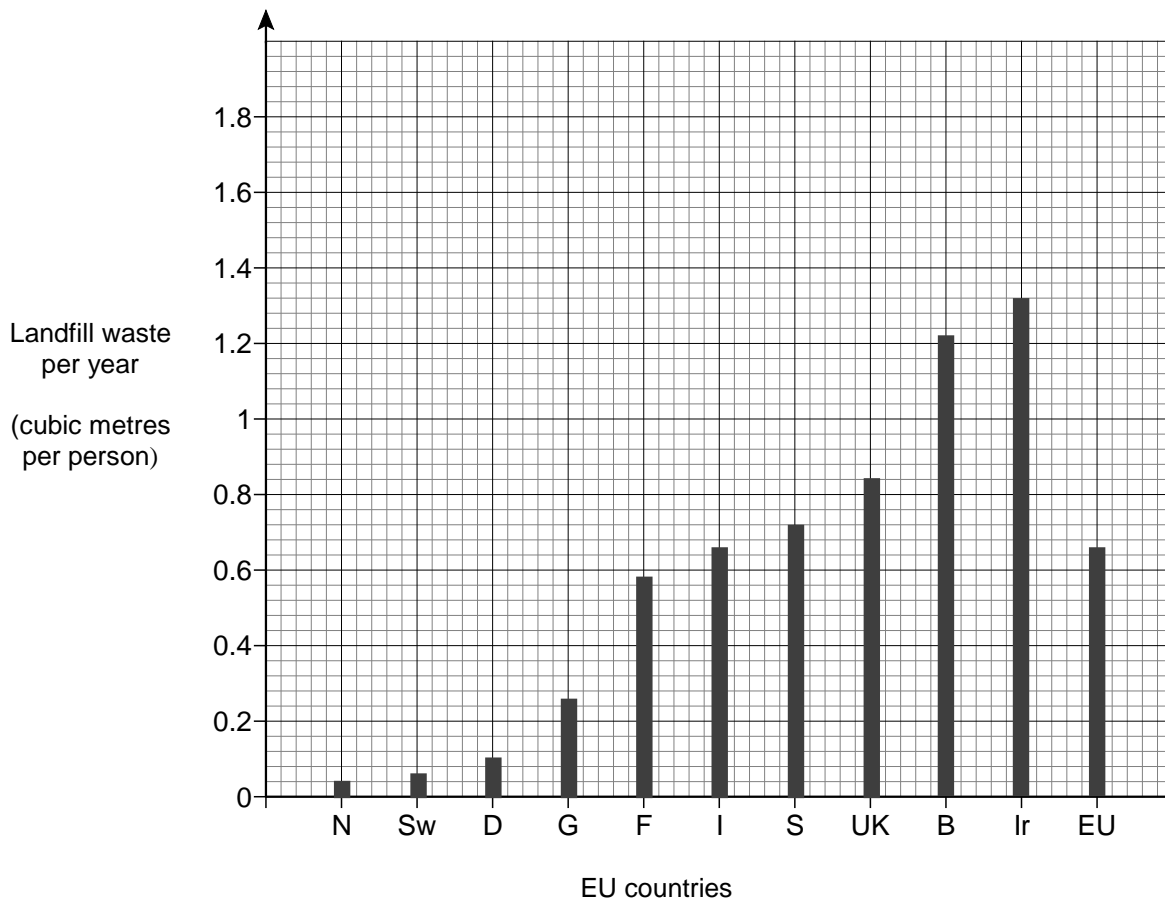
In recent years, people have been encouraged to recycle where possible.

However, where waste cannot be recycled, it is often put into a landfill site.

A landfill site is an area where waste is deposited and left to decay. At landfill sites waste is usually put into a large hole in the ground. Often an existing hole, such as a quarry, is used.

Though statistics are showing a decrease in the amount of waste per person going into landfill, this graph shows how big the problem was nine years ago.

**The volume of landfill waste in cubic metres per person in 2005 for several countries in the European Union**



N = Netherlands

Sw = Sweden

D = Denmark

G = Germany

F = France

I = Italy

S = Spain

UK = United Kingdom

B = Bulgaria

Ir = Ireland

EU = European Union average

In the UK, it is not always easy to find sufficient locations which will hold the amount of waste a town might need to send to landfill.

**END OF PRELIMINARY MATERIAL**

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