

You have one week to complete this. What you hand in should be your best work, and you must attempt every question.

If you are stuck then please either consult notes or textbooks, attend a workshop, or ask your teacher.

You may need to refer to the formula book, found [here](#):

or financial information, found [here](#):



1) Alan had an income of £60 000 He started his university course after 1 September 2012 .

(a) Calculate the income tax paid by Alan in the year.

[4 marks]

(b) Calculate the National Insurance paid monthly by Alan in the year.

[4 marks]

(c) Hence calculate the monthly income of Alan after income tax, National Insurance and student loan repayment have been deducted.

[3 marks]

2) An investment of £2800 has grown to £3412 in five years.

Find the annual rate of interest on this investment, expressed as a percentage.

[3 marks]

3) Ten people move house.
Here is a list of how far, in kilometres, their new house is from their old house.

6 12 7 11 10 9 3420 8 2 9

Which average would **not** be appropriate to use in this situation?
Give a reason for your answer.

[2 marks]

4) In 2016, voters in the UK voted on whether to leave the European Union (EU).

The table shows the results for **some** of the regions of the UK and the total number of votes of people who voted to remain in the EU.

The final column shows the % of those who could vote who did vote.

Region	Votes to remain in the EU	Votes to leave the EU	% who voted
East	1 448 616	1 880 367	75.7
London	2 263 519	1 513 232	69.7
Scotland	1 661 191	1 018 322	67.2
North-West	1 699 020	1 966 925	70.0
Wales	772 347	854 572	71.7
Full UK result	16 141 241		72.2

[Source : www.electoralcommission.org.uk]

(a) Which of the five given regions voted that the UK should leave the EU?

[1 mark]

(b) There were 46 500 001 people who could have voted in the UK.

72.2% of these people did vote.

Calculate the number of people who voted to leave the EU (the empty cell in the table).

[4 marks]

(c) Why is your answer to (b) unlikely to be exactly right?

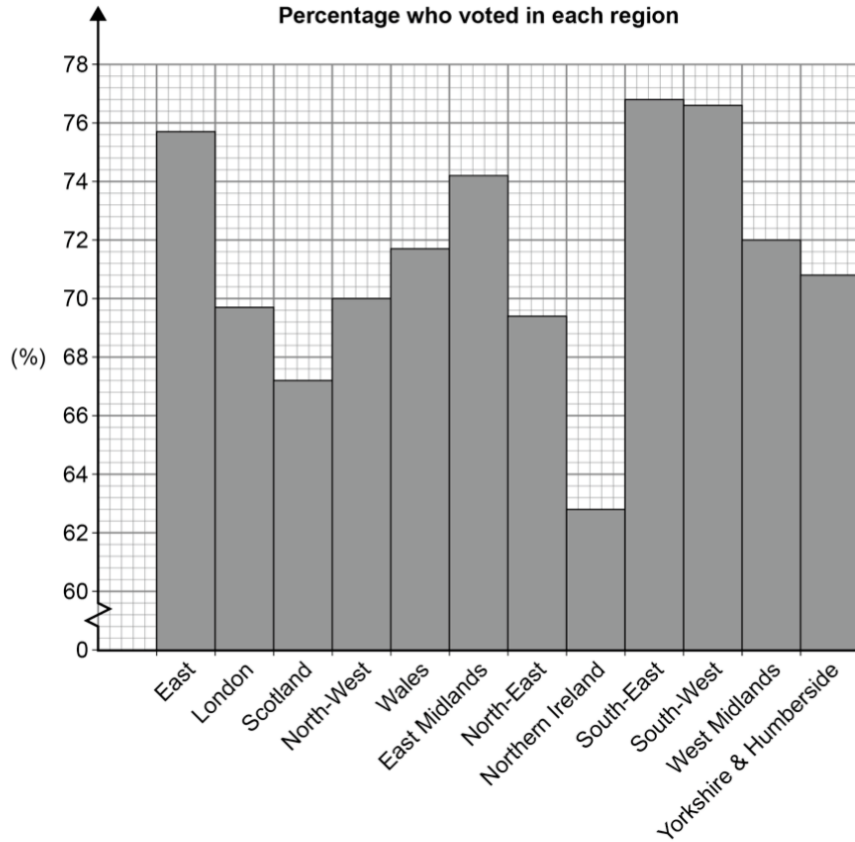
[1 mark]

(d) Sadiq said, "People were more likely to vote to leave the EU in regions where the percentage voting was higher".

Using the data from the table only, comment on Sadiq's statement.

[2 marks]

(e) Sadiq finds a graph in a newspaper showing the percentage who voted in each region.



Give **two** criticisms of the graph.

[2 marks]

(f) He finds the full list of which regions voted for the UK to remain in the EU or leave the EU.

Voted to Remain	Voted to Leave
London	East
Scotland	North-West
Northern Ireland	Wales
	East Midlands
	North-East
	South-East
	South-West
	West Midlands
	Yorkshire & Humberside

(f)(i) Compare statistically the % who voted in regions who voted to remain with those who voted to leave.

[7 marks]

(f)(ii) Describe one issue with your results in part (f)(i) and how you might overcome this issue.

[2 marks]

5) Nikita earned £4075 per month and had a tax-free allowance of £10 000.

(a) Calculate Nikita's taxable income.

[3 marks]

(b) Calculate the amount of income tax which Nikita paid in the year.

[5 marks]