

1 People in the UK are advised to take more exercise.

Estimate how much exercise you take per year.

State any assumptions you make.

You **must** show working to justify your answer.

[3 marks]

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- 2 Charlotte is organising a trip for herself and ten friends.  
The full price of the trip is £635 per person, but Charlotte sees an early-booking offer.

**Book early**  
12% discount  
**and**  
for every 8 people  
paying, the 9<sup>th</sup> goes  
free

Charlotte uses the offer to book the trip for herself and her ten friends.  
They divide the total cost equally between them.

How much does each person pay?

**[3 marks]**

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- 3 Leon needs to drive from Land's End to John O'Groats.  
He knows that the distance from Leeds to Manchester is 45 miles.  
He knows that his car will travel between 35 and 50 miles for each gallon of petrol, depending on his speed.



**3 (a)** Estimate the cost of petrol for his journey.

Assume that petrol costs 109.9 pence per litre.

State any other assumptions you make.

You **must** show your working.

Use 1 gallon = 4.5 litres

**[7 marks]**

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**3 (b)** Give **one** way you could improve the accuracy of your estimate.

**[1 mark]**

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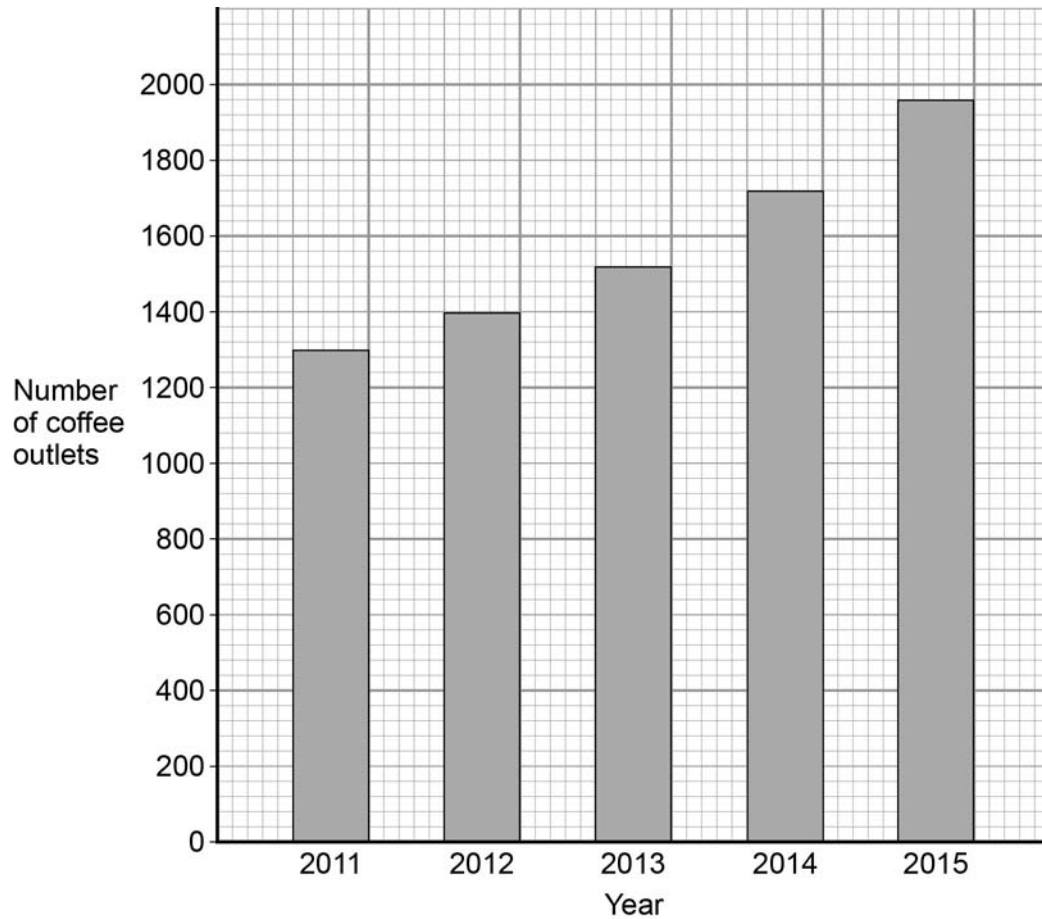
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## Costa Coffee UK

Costa Coffee is the largest and fastest-growing coffee shop chain in the UK. In 2014 it was voted the nation's favourite coffee shop for the fifth year in a row.

The company continues to expand in the UK as shown in this chart.



All the coffee beans for the Costa Coffee outlets come from farms in the Rainforest Alliance. Beans from these farms have been used since the company was founded in 1971

The amount of coffee beans used for each cup of coffee varies depending on the type of coffee (cappuccino, espresso, latte, etc), but is usually between 15 grams and 25 grams

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4

Use **Costa Coffee UK** information on the previous page.

Estimate the number of tonnes of coffee beans that will be used in 2015 for all the Costa Coffee outlets in the UK.

1 tonne = 1000 kilograms

State any assumptions you make.

You **must** show working to support your estimate.

**[8 marks]**

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**END OF QUESTIONS**