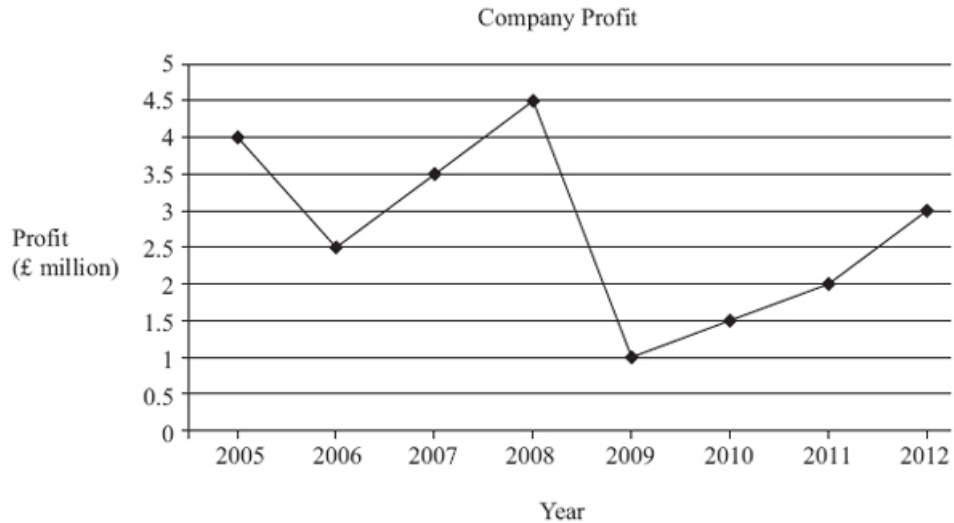


S095 Time series

Q1.

The graph shows information about the profit a company made each year from 2005 to 2012



(a) What was the profit in 2006?

..... (1)

(b) In which year did the company make the most profit?

..... (1)

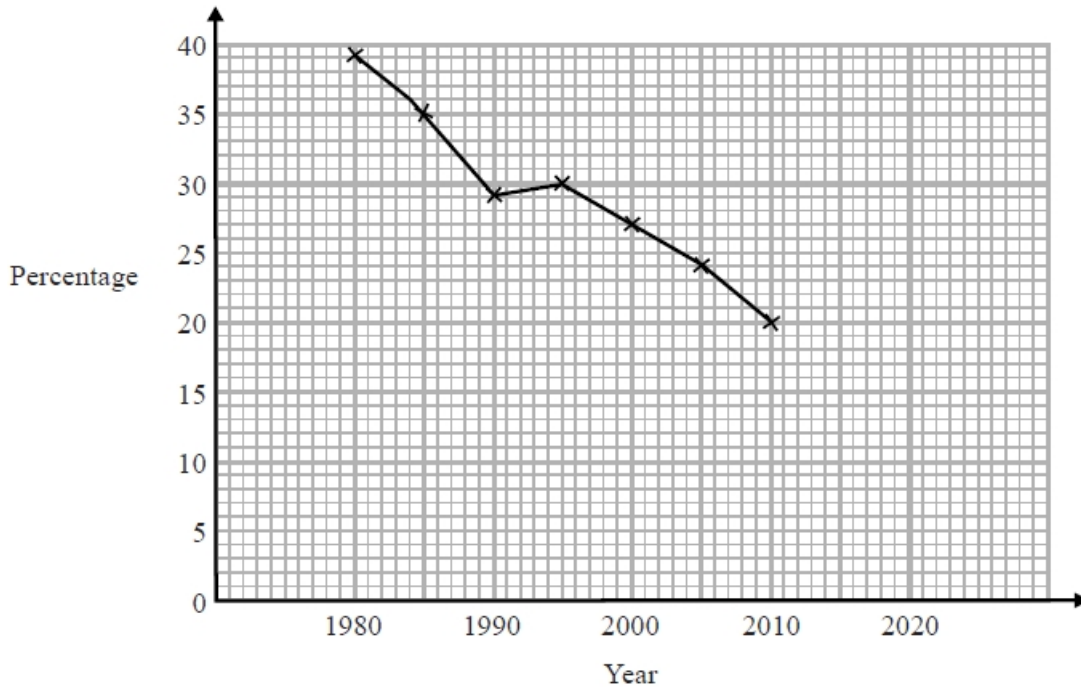
(c) Describe the change in profit from 2009 to 2012

.....
..... (1)

(Total for Question is 3 marks)

Q2.

The time series graph shows information about the percentages of the people in a village that used the village shop for the years between 1980 and 2010



(a) Describe the trend in the percentage of the people in the village who used the shop for this period.

.....

(1)

(b) (i) Use the graph to predict the percentage of the people in the village likely to use the shop in the year 2020

..... %

(ii) Is your prediction reliable?
Explain your answer.

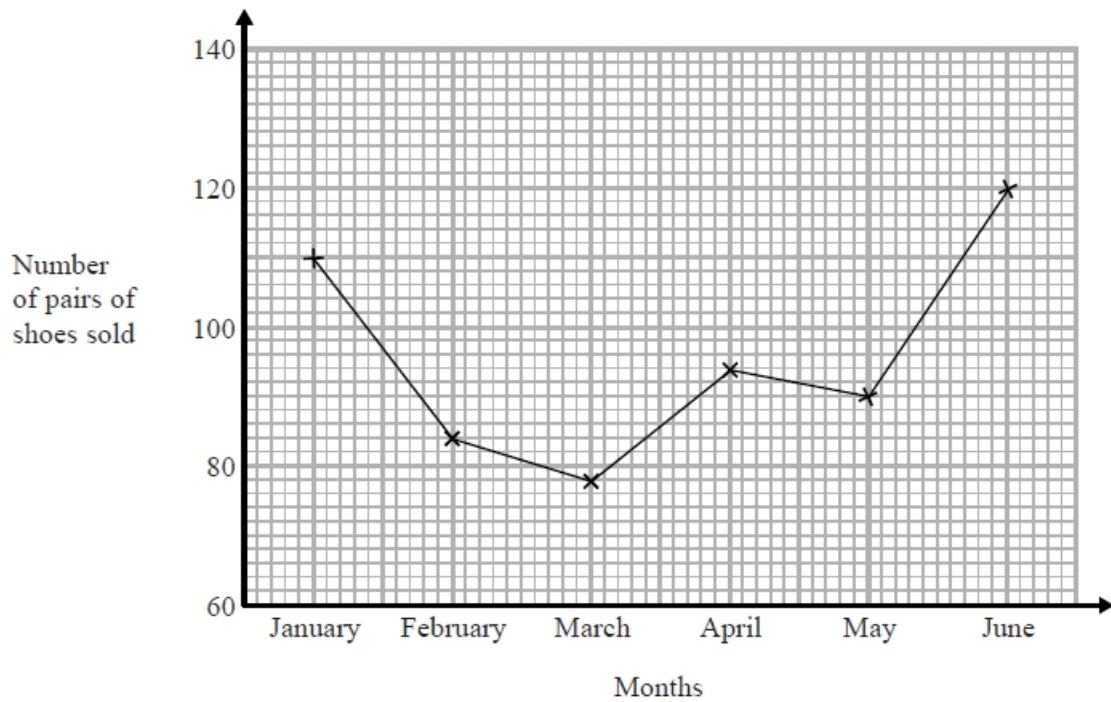
.....
.....

(3)

(Total for question = 4 marks)

Q3.

The time-series graph gives some information about the number of pairs of shoes sold in a shoe shop in the first six months of 2014



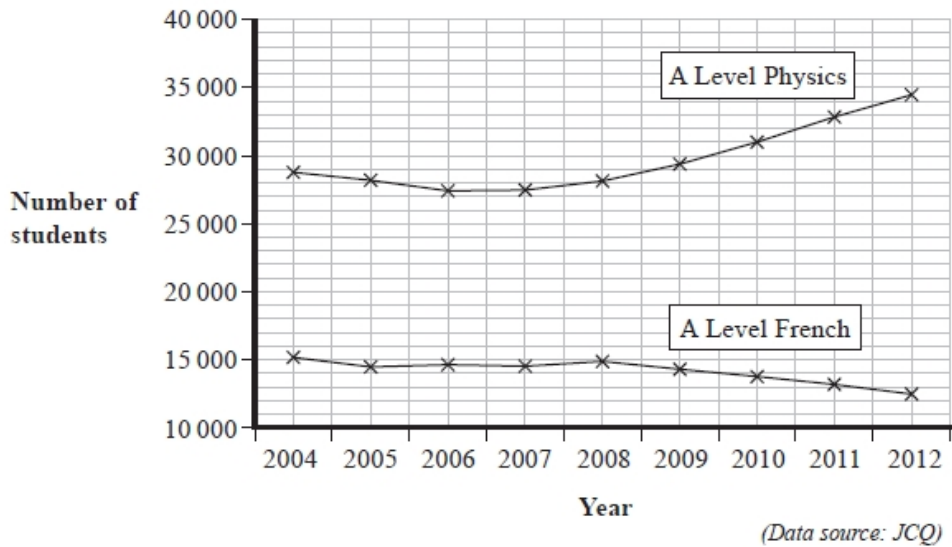
The sales target for the first six months of 2014 was to sell a mean of 96 pairs of shoes per month.

Did the shoe shop meet this sales target?
You must show how you get your answer.

(Total for question = 3 marks)

Q4.

The time series graphs show the numbers of students taking A Level Physics and A Level French in each of the years from 2004 to 2012



(a) Write down an estimate for the number of students taking A Level French

(i) in 2008

.....

(ii) in 2012

.....

(2)

(b) Describe the trend in the number of students taking A Level Physics from 2007 to 2012

.....

(1)

(c) Use the time series graphs to compare the numbers of students taking A Level Physics and A Level French.

.....

(2)

(Total for Question = 5 marks)

Q5.

The table gives some information about the numbers of overseas visitors to the UK.

Year	Quarter	Number of overseas visitors (100 000s)	4-point moving average (100 000s)
2007	1	8.6	
	2	13.0	
	3	15.7	11.9
	4	10.3	11.7
2008	1	7.8	11.5
	2	12.2	11.2
	3	14.5	10.9
	4	9.1	10.9
2009	1	7.8	10.725
	2	11.5	10.1
	3	12.0	
	4	6.7	

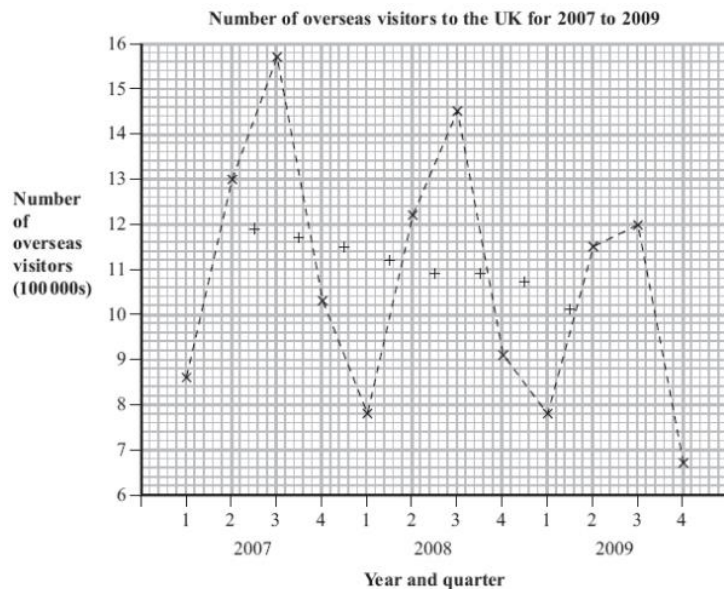
Data source: Adapted from Government Statistics website

The last 4-point moving average is missing from the table.

(a) (i) Calculate this 4-point moving average.

(ii) Plot this moving average on the time series graph.

(4)



(b) Write down the quarter with the greatest number of overseas visitors each year.

(1)

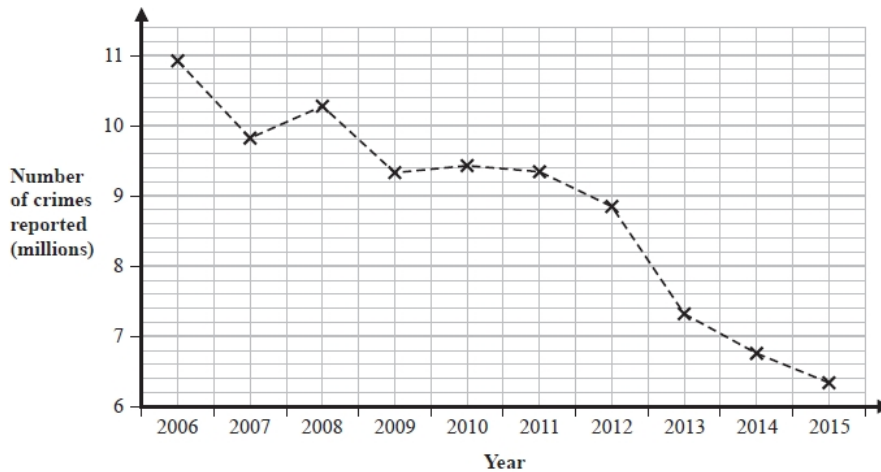
(c) Describe and interpret the trend in the number of overseas visitors over 2007 to 2009

(2)

(Total for Question is 7 marks)

Q6.

The graph shows the number of crimes reported in England and Wales for 2006 to 2015



Source: Crime Survey for England and Wales

(a) Write down the years that had between 9 million and 10 million crimes reported.

(1)

(b) Write down one reason why this graph may be misleading.

(1)

(c) Describe the trend between 2006 and 2015

(1)

(d) Between which two consecutive years did the biggest drop in the number of crimes reported take place?

..... and

(1)

The table shows the number of crimes reported and the index numbers for the years 2006 and 2015, using 2006 as the base year.

Year	2006	2015
Number of crimes reported (millions)	10.94	6.33
Index number	100	58

(e) Show that the index number for 2015 is 58, to the nearest whole number.

(1)

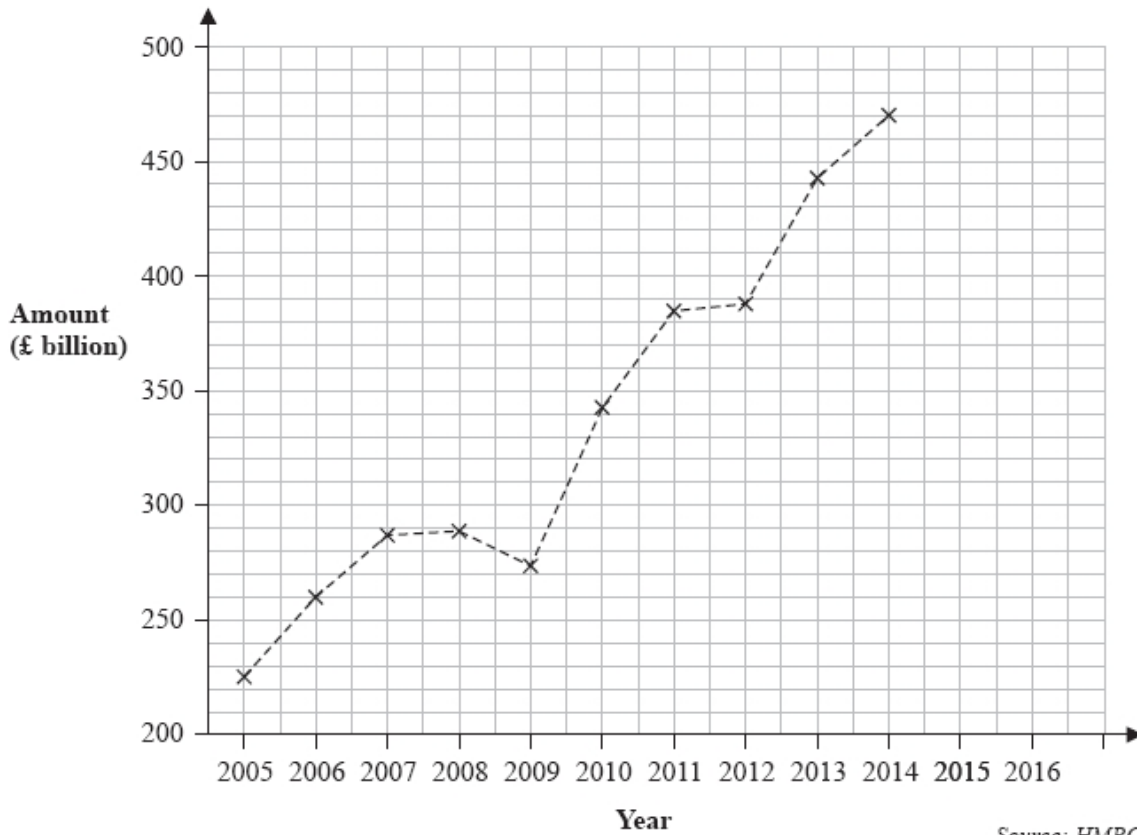
(f) Give an interpretation of the index number 58

(1)

(Total for question = 6 marks)

Q7.

The time series graph shows the total amount of money (£ billion) in Individual Savings Accounts in the United Kingdom for the years 2005–2014



Source: HMRC

(a) Write down the total amount of money in Individual Savings Accounts for the year 2014
 £ billion
 (1)

(b) (i) Draw a trend line on the time series graph.
 (ii) Describe the trend.

 (2)

(c) Explain why using the trend line to predict the total amount of money in Individual Savings Accounts for the year 2016 may be unreliable.

 (1)

(Total for question = 4 marks)