

Full name:

Approximately how much time have you spent revising for this assessment?	
What is your Aspirational Target Grade?	
What grade do you think you have achieved in this assessment?	

L6 A Level Maths
Assessment 2
Time: 55 minutes

Instructions

- Use black ink or ball-point pen.
- If pencil is used for diagrams/sketches/graphs it must be dark (HB or B).
- Fill in your name at the top of this page
- Answer all questions and ensure that your answers to parts of questions are clearly labelled.
- You should show sufficient working to make your methods clear. Answers without working may not gain full credit.
- Answers should be given to three significant figures unless otherwise stated.
- At the end of the assessment answer the 3 questions at the top of this page.

Information

- A booklet 'Mathematical Formulae and Statistical Tables' is provided.
- The marks for each question are shown in brackets
– use this as a guide as to how much time to spend on each question.

Advice

- Read each question carefully before you start to answer it.
- Check your answers if you have time at the end.

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Total
2	4	3	8	6	8	9	5	45
							Grade	

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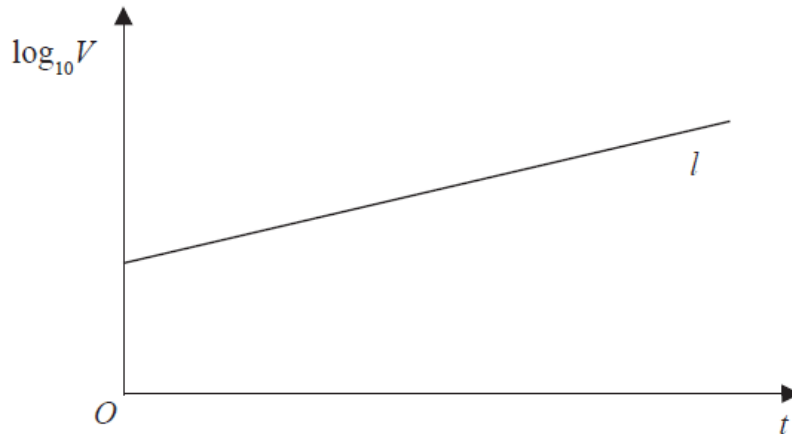


Figure 3

The value of a rare painting, £ V , is modelled by the equation $V = pq^t$, where p and q are constants and t is the number of years since the value of the painting was first recorded on 1st January 1980.

The line l shown in Figure 3 illustrates the linear relationship between t and $\log_{10}V$ since 1st January 1980.

The equation of line l is $\log_{10}V = 0.05t + 4.8$.

- (a) Find, to 4 significant figures, the value of p and the value of q . (4)
- (b) With reference to the model, interpret
- (i) the value of the constant p ,
 - (ii) the value of the constant q . (2)
- (c) Find the value of the painting, as predicted by the model, on 1st January 2010, giving your answer to the nearest hundred thousand pounds. (2)

(Total 8 marks)

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