

New
Specification

Rewarding Learning

ADVANCED
General Certificate of Education
2019

Centre Number

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Candidate Number

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Mathematics

Assessment Unit A2 1

assessing

Pure Mathematics



[AMT11]

AMT11

TUESDAY 28 MAY, MORNING

TIME

2 hours 30 minutes.

INSTRUCTIONS TO CANDIDATES

Write your Centre Number and Candidate Number in the spaces provided at the top of this page.

You must answer **all twelve** questions in the spaces provided.

Do not write outside the boxed area on each page or on blank pages or tracing paper.

Complete in black ink only. **Do not write with a gel pen.**

Questions which require drawing or sketching should be completed using an H.B. pencil. Show clearly the full development of your answers. **Answers without working may not gain full credit.**

Answers should be given to three significant figures unless otherwise stated.

You are permitted to use a graphic or scientific calculator in this paper.

INFORMATION FOR CANDIDATES

The total mark for this paper is 150

Figures in brackets printed down the right-hand side of pages indicate the marks awarded to each question or part question.

A copy of the **Mathematical Formulae and Tables booklet** is provided.

Throughout the paper the logarithmic notation used is $\ln z$ where it is noted that $\ln z \equiv \log_e z$

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(b) The graph of the function $y = h(x)$ is sketched in **Fig. 2** below.

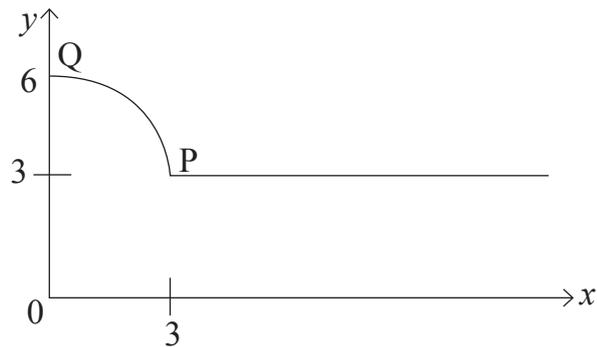


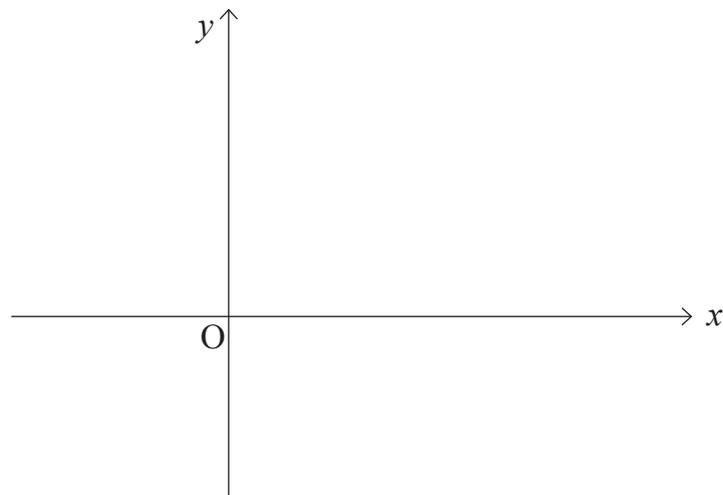
Fig. 2

(i) On the axes below sketch the graph of

$$y = \frac{1}{3}h(3x)$$

and clearly label the images of the points P and Q.

[2]

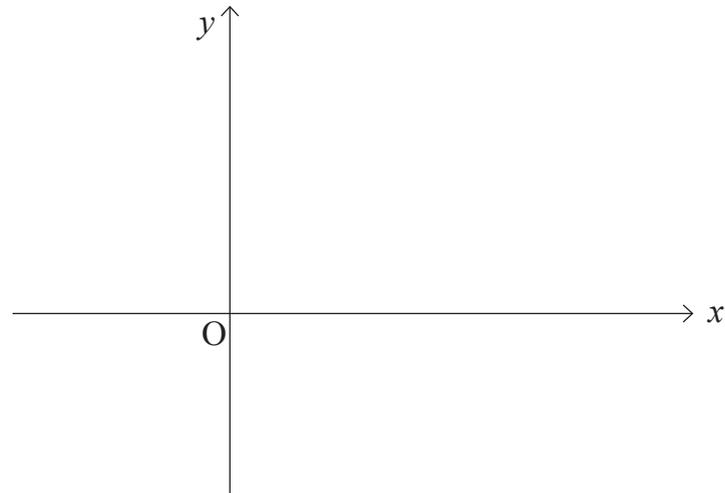


(ii) On the axes below sketch the graph of

$$y = 6 - h(x)$$

and clearly label the images of the points P and Q.

[2]



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For Examiner's use only	
Question Number	Marks
1	
2	
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Total Marks	
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Examiner Number

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