

Paper Reference 9MA0/01
Pearson Edexcel
Level 3 GCE

Mathematics
Advanced
PAPER 1: Pure Mathematics 1

Wednesday 4 June 2025 – Afternoon

Time: 2 hours

Diagram Booklet

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In the boxes below, write your name, centre number and
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Other names					
Centre Number					
Candidate Number					

INSTRUCTIONS

There may be spare copies of some diagrams.

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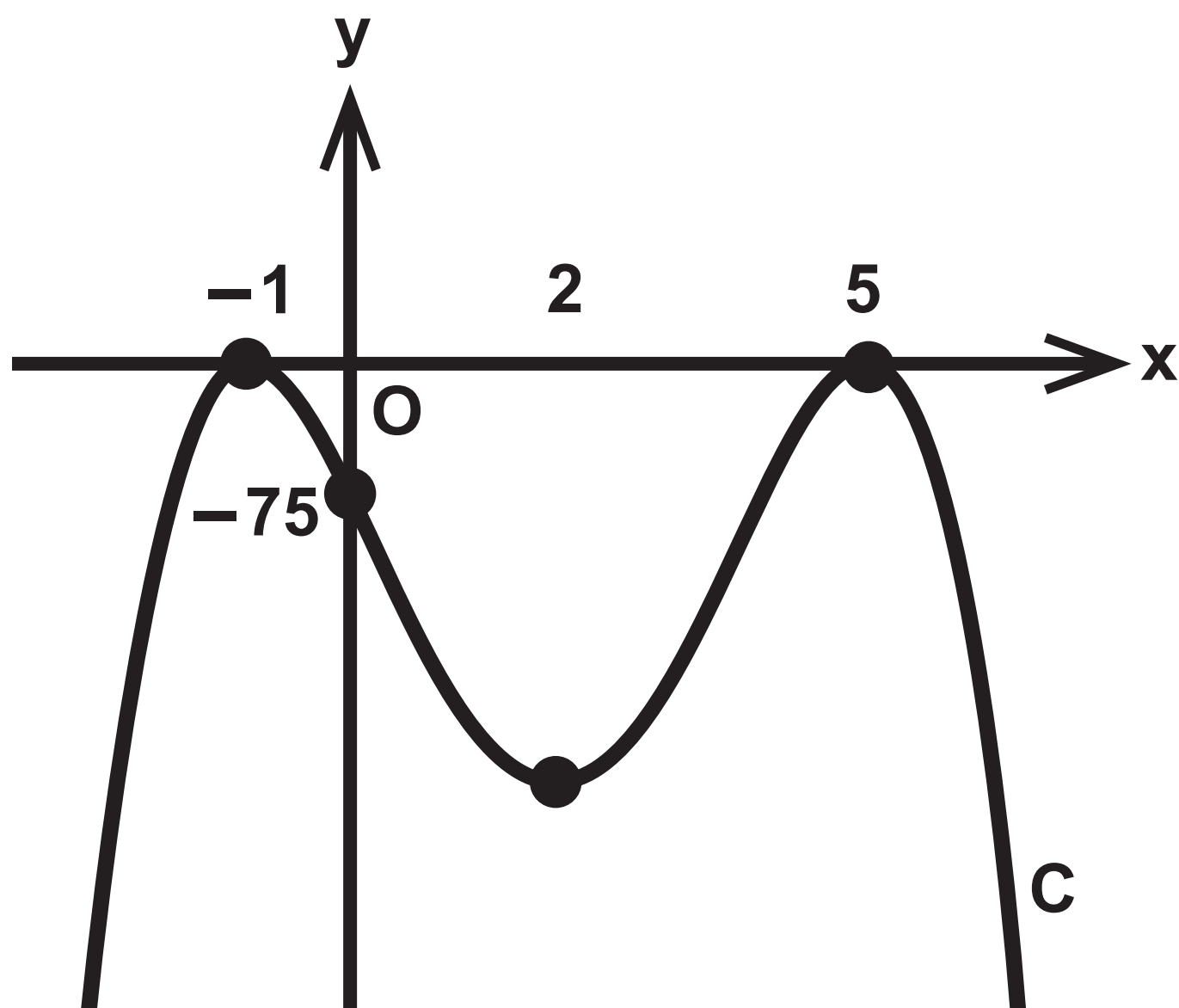
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Spare Copies

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Question 7



Question 8

Let $m = 5k$

Consider $m^2 = (5k)^2 = 25k^2 = 5 \times 5k^2 = 5n$ where $n = 5k^2$ ✓

Let $m = 5k + 1$

Consider $m^2 = (5k + 1)^2$

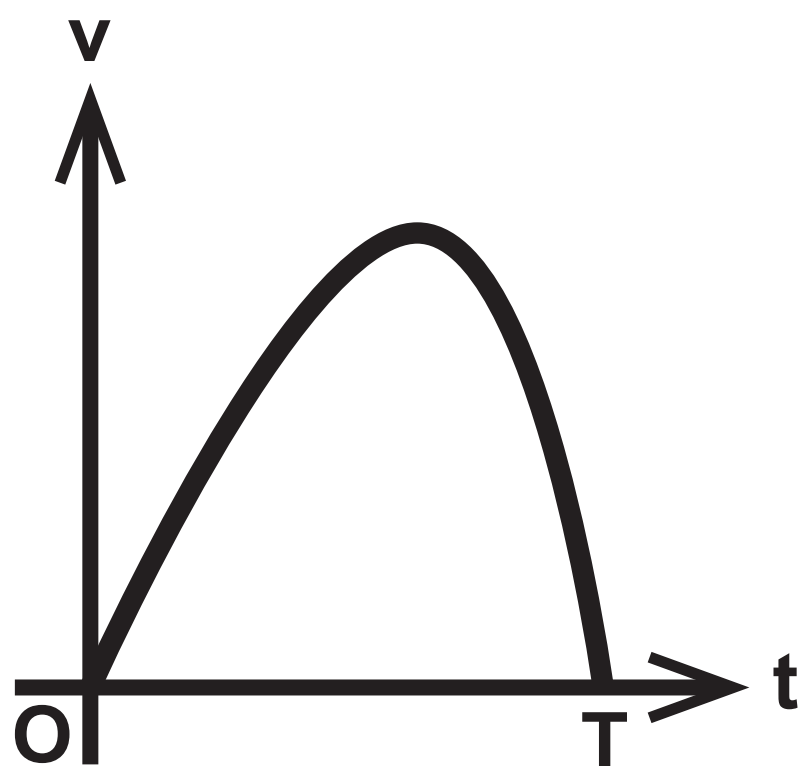
$$= 25k^2 + 10k + 1 = 5(5k^2 + 2k) + 1 = 5n + 1 \quad \text{where } n = 5k^2 + 2k \quad \checkmark$$

Let $m = 5k + 2$

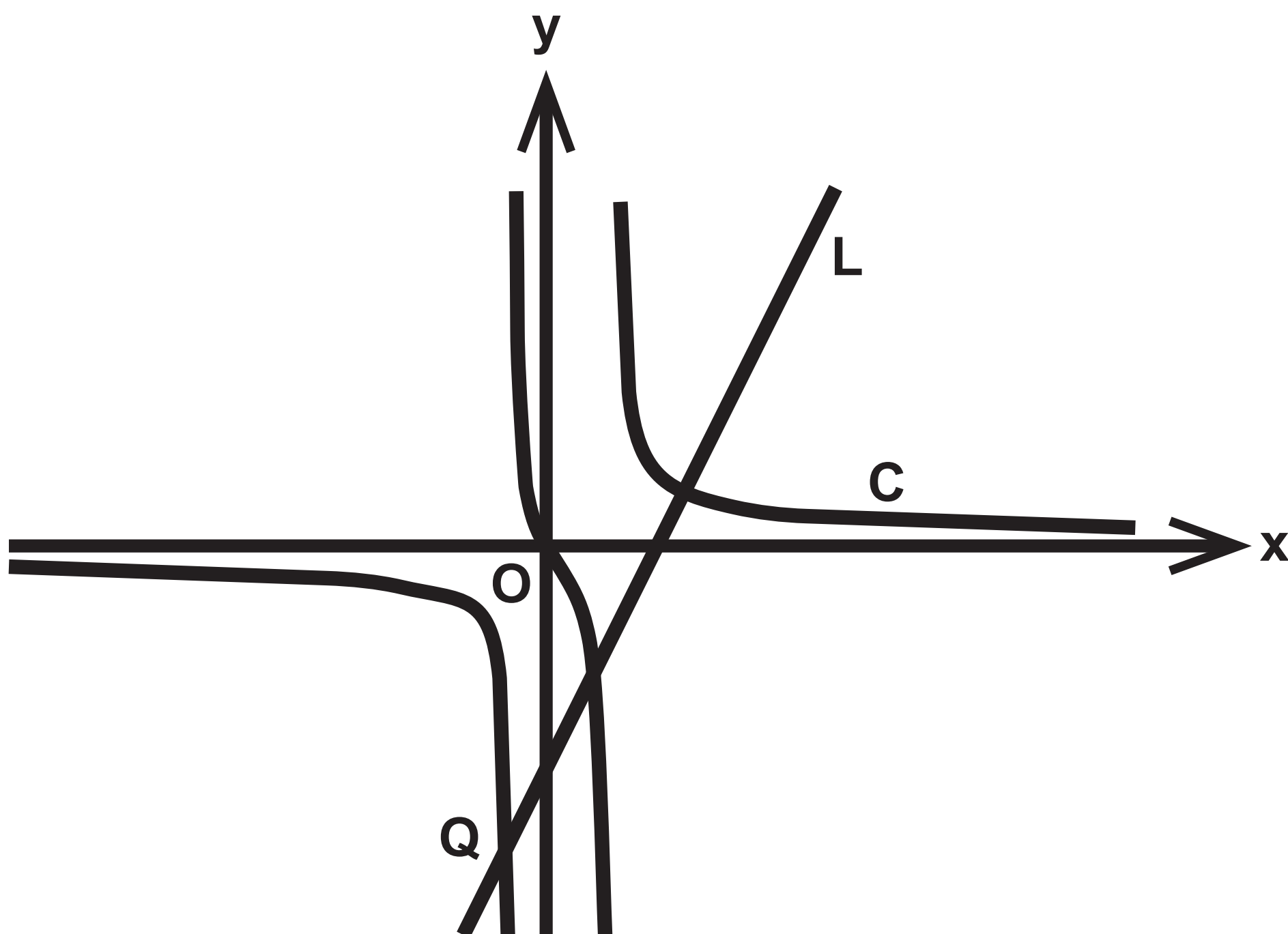
Consider $m^2 = (5k + 2)^2$

$$= 25k^2 + 10k + 4 = 5(5k^2 + 2k + 1) - 1 = 5n - 1 \quad \text{where } n = 5k^2 + 2k + 1 \quad \checkmark$$

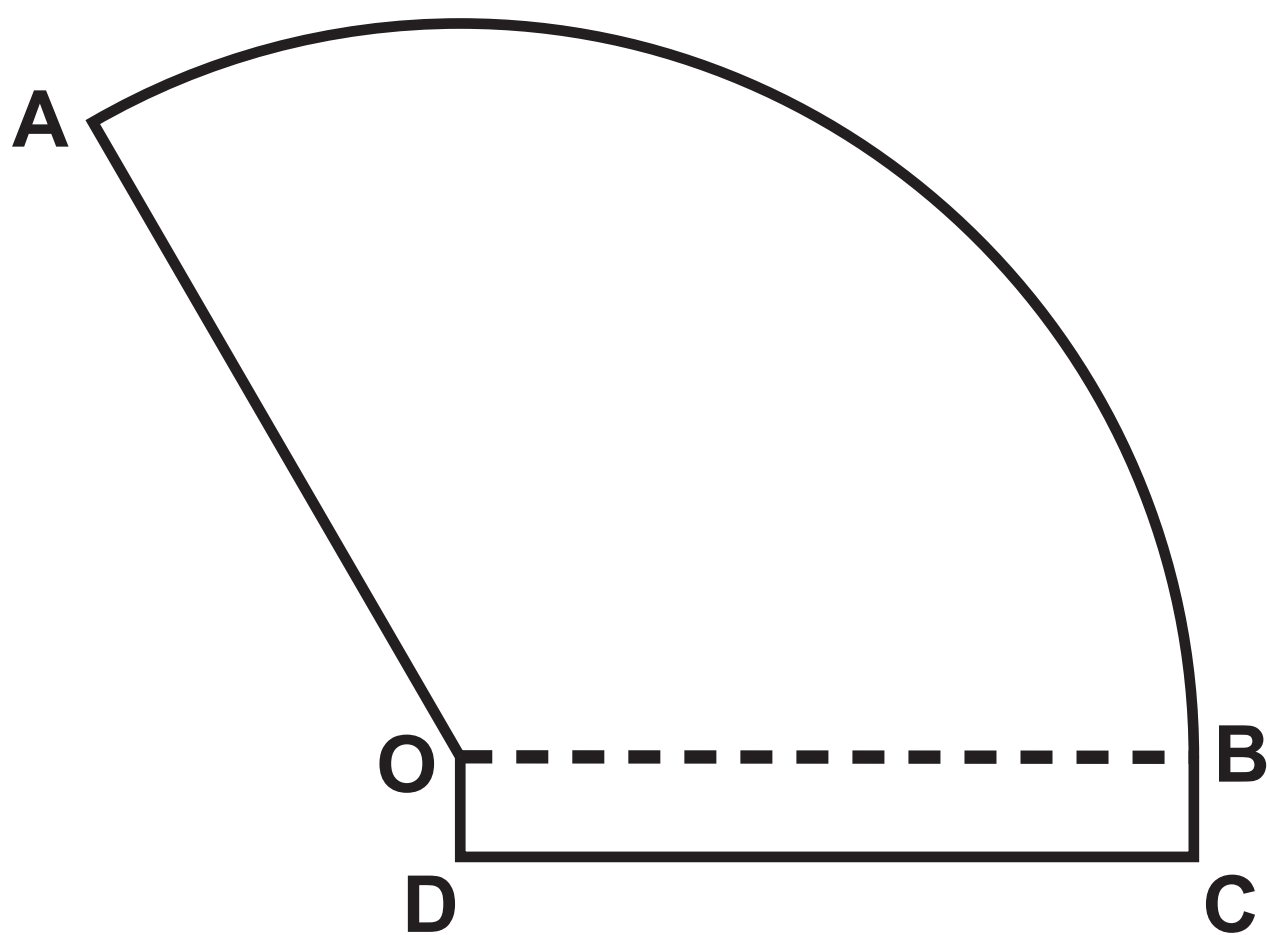
Question 9



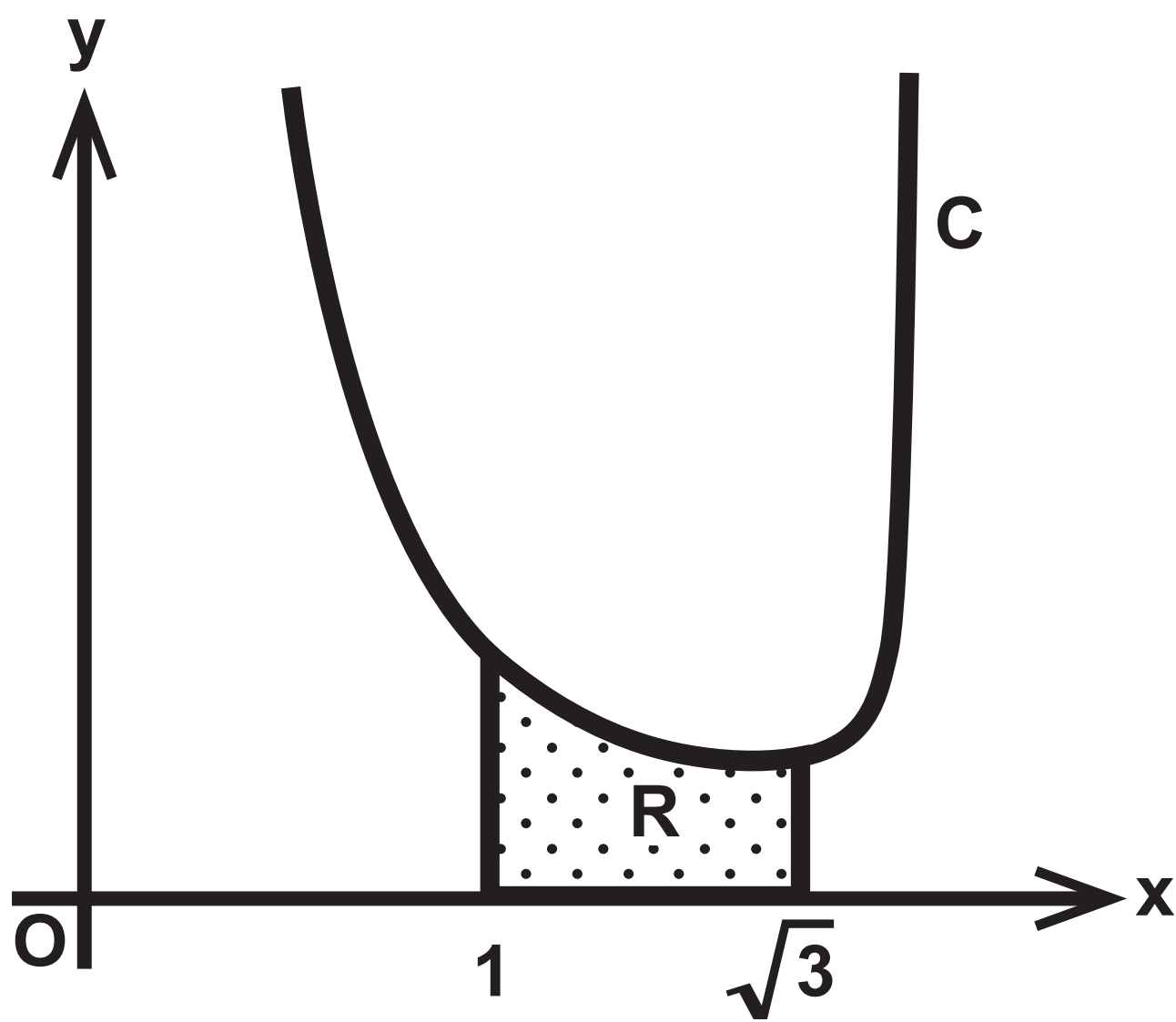
Question 12



Question 15



Question 16



Question 8 – spare copy

Let $m = 5k$

Consider $m^2 = (5k)^2 = 25k^2 = 5 \times 5k^2 = 5n$ where $n = 5k^2$ ✓

Let $m = 5k + 1$

Consider $m^2 = (5k + 1)^2$

$$= 25k^2 + 10k + 1 = 5(5k^2 + 2k) + 1 = 5n + 1 \quad \text{where } n = 5k^2 + 2k \quad \checkmark$$

Let $m = 5k + 2$

Consider $m^2 = (5k + 2)^2$

$$= 25k^2 + 10k + 4 = 5(5k^2 + 2k + 1) - 1 = 5n - 1 \quad \text{where } n = 5k^2 + 2k + 1 \quad \checkmark$$