

# Solomon Practice Paper

## Pure Mathematics 5A

Time allowed: 90 minutes

Centre: [www.CasperYC.club](http://www.CasperYC.club)

Name:

Teacher:

Question	Points	Score
1	5	
2	8	
3	9	
4	10	
5	10	
6	10	
7	11	
8	12	
Total:	75	

How I can achieve better:

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Last updated: December 24, 2025



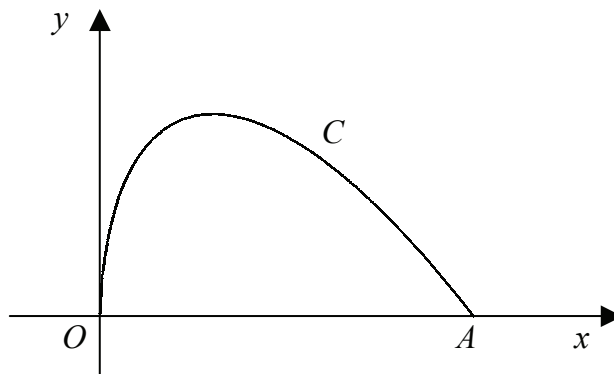






4. The parametric coordinates of the curve  $C$  shown above are

$$x = t^2, \quad \text{and} \quad y = t - \frac{1}{3}t^3, \quad 0 \leq t \leq a.$$



The curve  $C$  meets the  $x$ -axis at the point  $A$  where  $t = a$ .

(a) Find the value of  $a$ . [2]

The curve  $C$  is rotated through  $2\pi$  about  $Ox$ .

(b) Find the surface area of the solid generated. [8]

Total: 10

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