

Solomon Practice Paper

Core Mathematics 1G

Time allowed: 90 minutes

Centre: www.CasperYC.club

Name:

Teacher:

Question	Points	Score
1	3	
2	4	
3	6	
4	7	
5	10	
6	10	
7	11	
8	11	
9	13	
Total:	75	

How I can achieve better:

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9. The curve C has the equation $y = f(x)$ where

$$f'(x) = 1 + \frac{2}{\sqrt{x}}, \quad x > 0.$$

The straight line l has the equation $y = 2x - 1$ and is a tangent to C at the point P .

- (a) State the gradient of C at P . [1]
- (b) Find the x -coordinate of P . [3]
- (c) Find an equation for C . [6]
- (d) Show that C crosses the x -axis at the point $(1, 0)$ and at no other point. [3]

Total: 13

