

Solomon Practice Paper

Core Mathematics 2F

Time allowed: 90 minutes

Centre: www.CasperYC.club

Name:

Teacher:

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

How I can achieve better:

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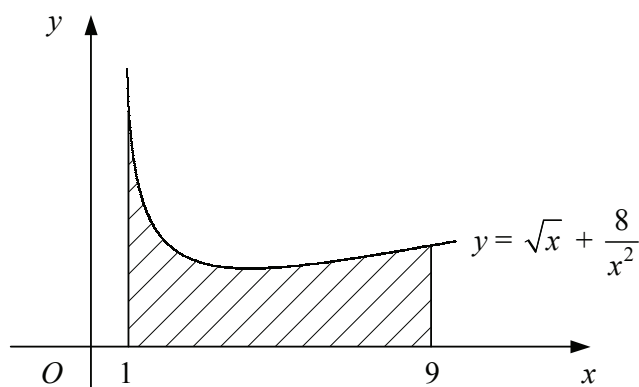


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8. Figure shows the curve with equation $y = \sqrt{x} + \frac{8}{x^2}, x > 0$.



- (a) Find the coordinates of the minimum point of the curve. [7]
- (b) Show that the area of the shaded region bounded by the curve, the x -axis and the lines $x = 1$ and $x = 9$ is $24\frac{4}{9}$. [5]

Total: 12



9. The first three terms of a geometric series are $(x - 2)$, $(x + 6)$ and x^2 respectively.

(a) Show that x must be a solution of the equation [3]

$$x^3 - 3x^2 - 12x - 36 = 0. \quad (\star)$$

(b) Verify that $x = 6$ is a solution of equation (\star) and show that there are no other real solutions. [6]

Using $x = 6$,

(c) find the common ratio of the series, [1]

(d) find the sum of the first eight terms of the series. [2]

Total: 12

