

Solomon Practice Paper

Pure Mathematics 2K

Time allowed: 90 minutes

Centre: www.CasperYC.club

Name:

Teacher:

Question	Points	Score
1	6	
2	7	
3	8	
4	9	
5	9	
6	11	
7	11	
8	14	
Total:	75	

How I can achieve better:

-
-
-



Last updated: May 5, 2023



8. (a) By sketching the graphs $y = (x - 3)^2$ and $y = \sqrt{x}$ on the same diagram, show that the equation $(x - 3)^2 = \sqrt{x}$ has exactly two positive roots. [4]

(b) Show that one root of the equation, α , lies in the interval $1 < \alpha < 2$, and find the value of N such that [5]

$$\frac{N}{10} < \alpha < \frac{N + 1}{10}.$$

(c) Using an iteration of the form [5]

$$x_{n+1} = x_n^{\frac{1}{4}} + k,$$

with a starting value of $x_1 = 4$, find the other root of the equation, β , correct to 3 significant figures.

Total: 14

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....



