

# Solomon Practice Paper

## Further Pure Mathematics 1G

Time allowed: 90 minutes

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

Name:

Teacher:

Question	Points	Score
1	7	
2	7	
3	9	
4	11	
5	12	
6	12	
7	17	
Total:	75	

How I can achieve better:

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- 



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4. The complex number  $z$  is given by

$$z = \frac{1 + i\sqrt{3}}{1 - i\sqrt{3}}.$$

(a) Show that  $z$  can be expressed in the form

[4]

$$\lambda(1 - i\sqrt{3})$$

where  $\lambda$  is a rational number which you should find.

(b) Find the modulus and argument of  $z$ .

[3]

(c) Hence, or otherwise, find the modulus and argument of

[4]

$$\left(\frac{1 + i\sqrt{3}}{1 - i\sqrt{3}}\right)^4.$$

Total: 11







