

# Solomon Practice Paper

## Pure Mathematics 1L

Time allowed: 90 minutes

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

Name:

Teacher:

Question	Points	Score
1	5	
2	6	
3	7	
4	8	
5	10	
6	12	
7	13	
8	14	
Total:	75	

How I can achieve better:

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Last updated: December 24, 2025





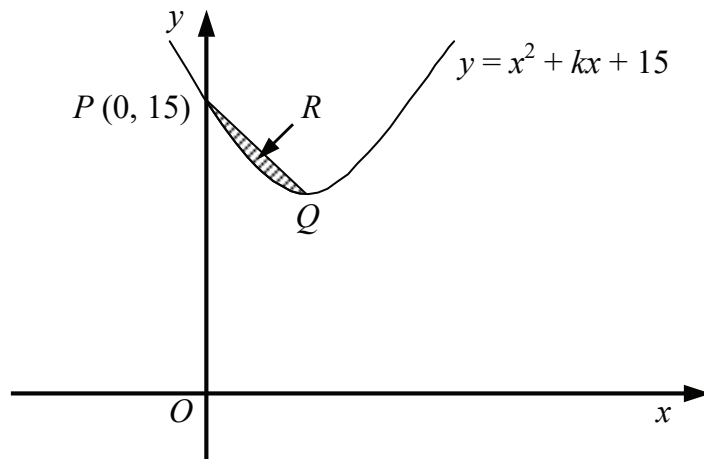








6. Figure shows the curve  $y = x^2 + kx + 15$  which crosses the  $y$ -axis at the point  $P(0, 15)$ .



$Q$  is the minimum point on the curve.

(a) Find the coordinates of the point  $Q$  in terms of  $k$ . [3]

Given that  $k = -4$ ,

(b) calculate the distance  $PQ$  giving your answer in surd form as simply as possible, [3]

(c) find the area of the shaded region  $R$  enclosed by the curve and the line  $PQ$ . [6]

Total: 12

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