

Solomon Practice Paper

Pure Mathematics 1B

Time allowed: 90 minutes

Centre: www.CasperYC.club

Name:

Teacher:

Question	Points	Score
1	4	
2	5	
3	8	
4	9	
5	12	
6	12	
7	12	
8	13	
Total:	75	

How I can achieve better:

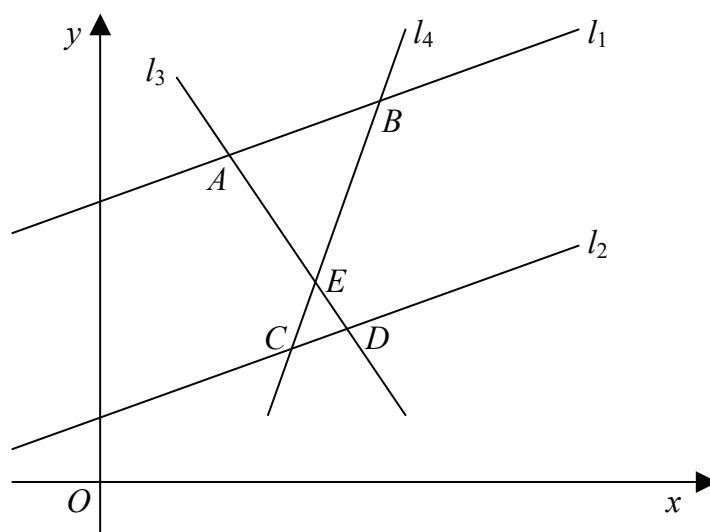
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5. Figure shows the four lines l_1, l_2, l_3 and l_4 .



Line l_1 passes through the points $A(3, 8)$ and $B(7, 10)$.

Line l_2 passes through the points $C(4, 3)$ and $D(6, 4)$.

(a) Find an equation of the line l_1 in the form $ax + by + c = 0$. [3]

(b) Prove that the line l_2 is parallel to the line l_1 . [2]

(c) Calculate the lengths AB and CD giving your answers in surd form. [3]

Line l_3 passes through the points A and D .

Line l_4 passes through the points B and C .

Lines l_3 and l_4 intersect at the point E .

(d) By using your answer to part (c), or otherwise, show that the area of triangle ABE is four times the area of triangle CDE . [4]

Total: 12

