

Applications and Interpretation Standard Level for IBDP Mathematics Practice Paper Set 1 – Paper 1 (90 Minutes)

Question – Answer Book

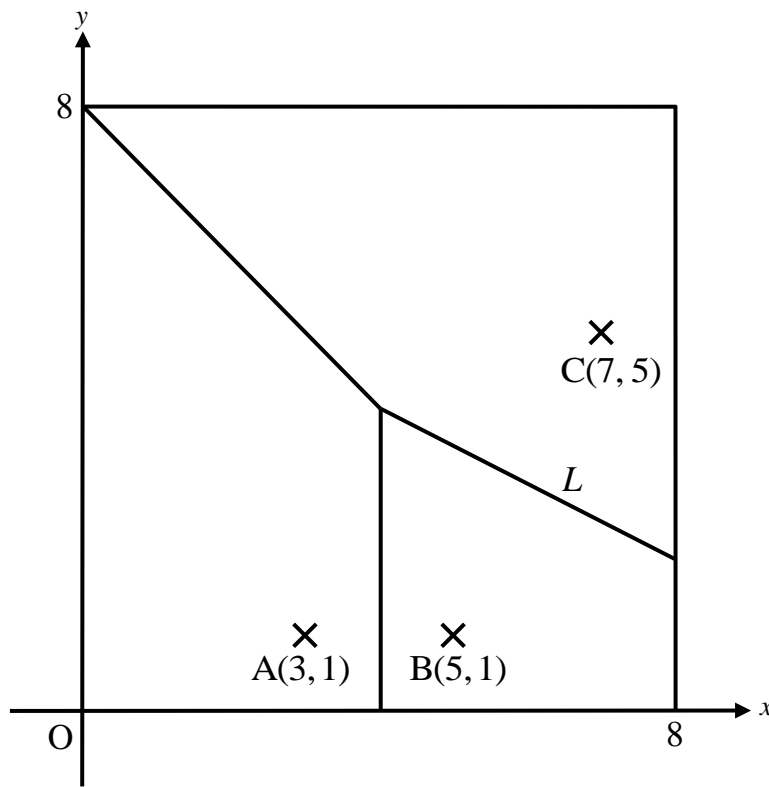
Instructions

1. Attempt **ALL** questions. Write your answers in the spaces provided in this Question - Answer Book.
2. A graphic display calculator is needed.
3. You are suggested to prepare a formula booklet of Applications and Interpretation for IBDP Mathematics when attempting the questions.
4. Supplementary answer sheets and graph papers will be supplied on request.
5. Unless otherwise specified, **ALL** working must be clearly shown.
6. Unless otherwise specified, numerical answers should be either **EXACT** or correct to **3 SIGNIFICANT FIGURES**.
7. The diagrams in this paper are **NOT** necessarily drawn to scale.
8. Information to be read before you start the exam:



	Marker's Use Only	Examiner's Use Only	
Question Number	Marks	Marks	Maximum Mark
1			4
2			5
3			5
4			6
5			6
6			6
7			6
8			6
9			6
10			5
11			7
12			6
13			6
14			6
Overall			
Paper 1 Total			80

10. The diagram below shows the Voronoi diagram of three restaurants for take-away meals, A, B and C, in a town bounded by the coordinate axes, the lines $x=8$ and $y=8$, where 1 unit represents 1 km.



The straight line L is the boundary separating the Voronoi cells of B and C. It is given that $(4, 4)$ is a point on L .

- (a) (i) Find the gradient of L .
- (ii) Hence, find the equation of L , giving the answer in slope-intercept form.

[4]

Kimberly would like to find a restaurant closest to her office to minimize the delivery time of her meal during lunchtime. The position of her office is at $(7, 2.5)$.

- (b) State the reason that she is indifferent from choosing the restaurant B and the restaurant C.

[1]

