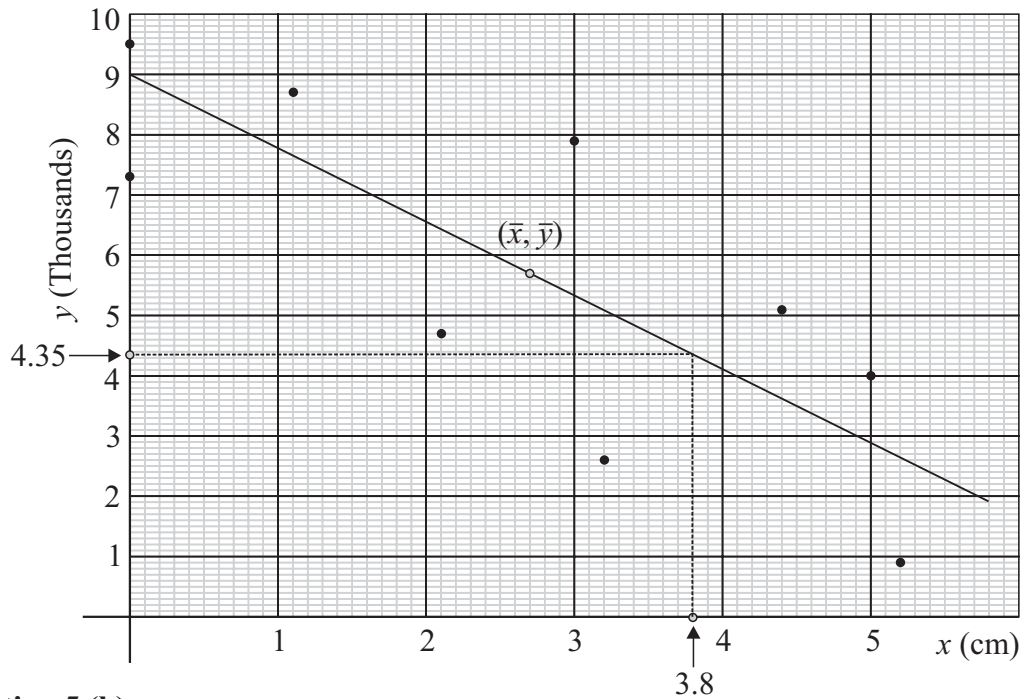


## SAMPLE PAPER 6: PAPER 2

### QUESTION 5 (25 MARKS)

#### Question 5 (a)

|                                     |     |     |     |     |     |     |     |     |     |
|-------------------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Rainfall ( $x$ cm)                  | 4.4 | 3.0 | 5.2 | 5.0 | 2.1 | 0   | 0   | 1.1 | 3.2 |
| Number of tourists ( $y$ thousands) | 5.1 | 7.9 | 0.9 | 4.0 | 4.7 | 7.3 | 9.5 | 8.7 | 2.6 |



#### Question 5 (b)

$$\bar{x} = \frac{4.4 + 3.0 + 5.2 + 5.0 + 2.1 + 0 + 0 + 1.1 + 3.2}{9} = 2.7$$

$$\bar{y} = \frac{5100 + 7900 + 900 + 4000 + 4700 + 7300 + 9500 + 8700 + 2600}{9} = 5633$$

#### Question 5 (c) [See graph]

#### Question 5 (d)

$(2.7, 5633), (0, 9000)$

$$m = \frac{9000 - 5633}{0 - 2.7} = -1247$$

#### Question 5 (f)

$m = -1247, (x_1, y_1) = (0, 9000)$

$$y - 9000 = -1247(x - 0)$$

$$1247x + y - 9000 = 0$$

#### Question 5 (e)

For every increase of 1 cm in rainfall, there is a decrease in 1247 tourists.

#### Question 5 (g)

(i) Number of tourists = 4350

(ii)  $x = 3.8 : 1247(3.8) + y - 9000 = 0$

$$\therefore y = 4261$$

The student's result is smaller by 89 or is about 2% smaller ( $\frac{89}{4350} \times 100\% \approx 2\%$ ).