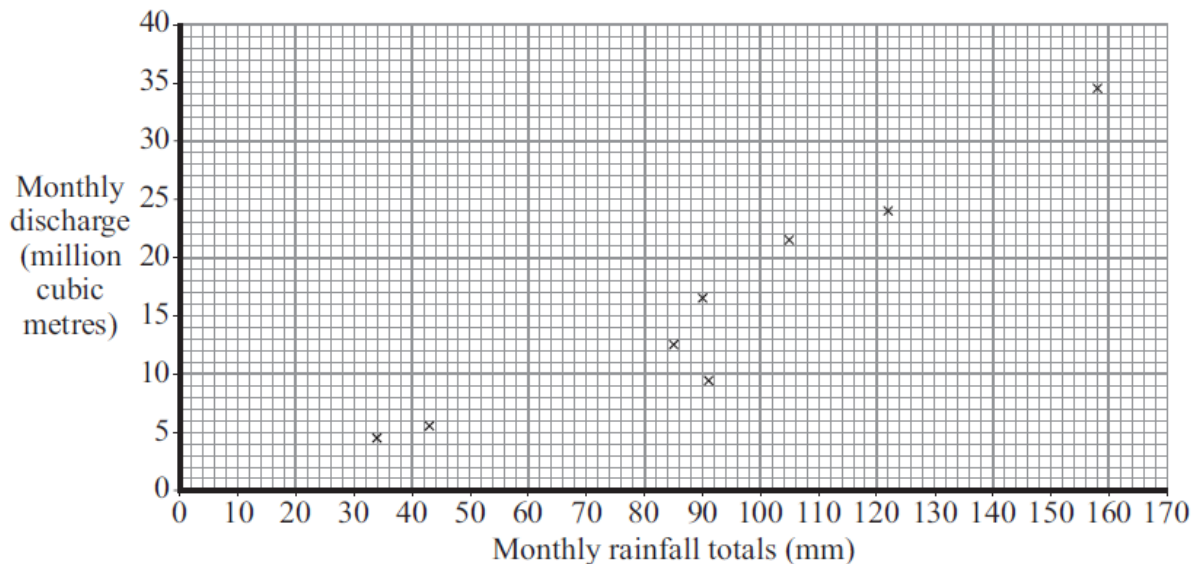


*Print and complete the following questions and bring it to your first geography lesson.*

- 1) Study Figure 1, a scatter graph showing the relationship between selected monthly rainfall totals in the River Severn catchment and the corresponding month's river discharge at a selected point in the river channel.

**Figure 1**



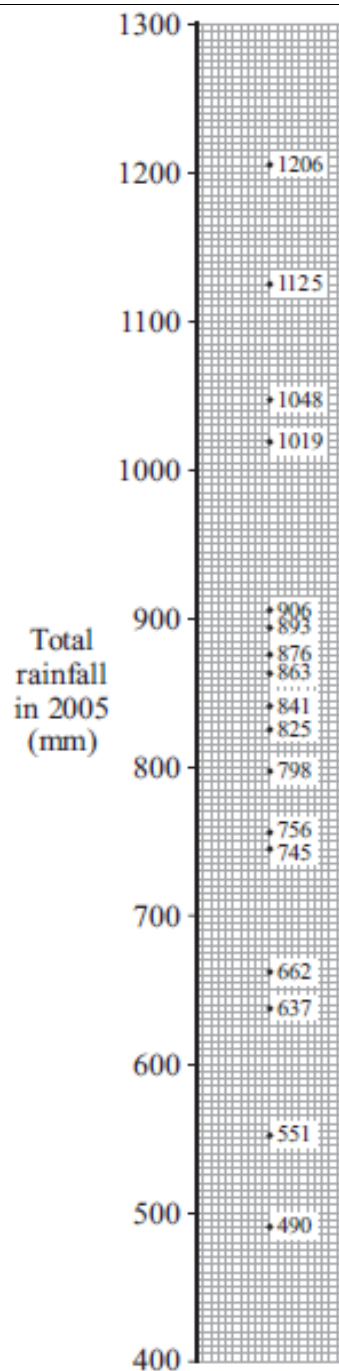
- 1a) Complete Figure 1 by plotting the data provided in the table below and by adding a best fit line. (3 marks)

| Monthly rainfall totals<br>(mm) | Monthly discharge<br>(million cubic metres) |
|---------------------------------|---------------------------------------------|
| 90                              | 18.8                                        |
| 63                              | 11.9                                        |

- 1b) Describe the relationship shown in figure 1 between monthly rainfall and corresponding monthly discharge. (2 marks)

- 2) Study figure 2, a dispersion diagram showing total rainfall at various weather stations across England in 2005.

**Figure 2**



2a) The total rainfall at two other weather stations is given below. Plot these data on Figure 2 and then give the median value. (3 marks)

589 mm

1253 mm

Median ..... (mm)

2b) Using the formulae provided, state the upper quartile (UQ), lower quartile (LQ) and interquartile range (IQR) for the completed figure 2.

n = number in the sample

$$UQ = \frac{n+1}{4} \text{th position in the rank order} = \dots\dots\dots (\text{mm})$$

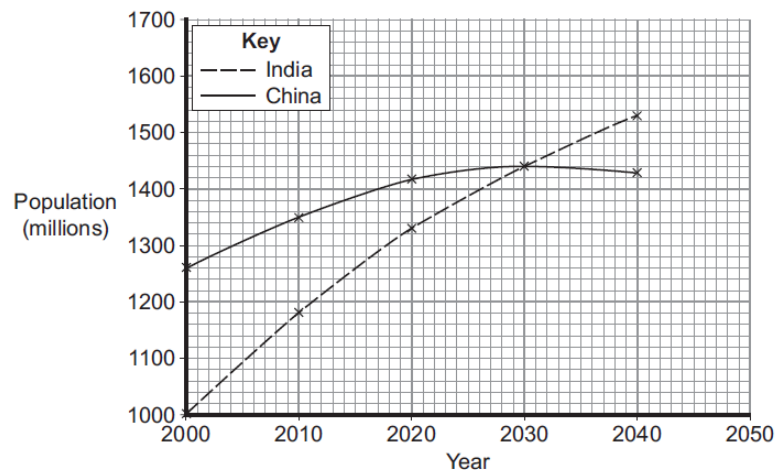
$$LQ = \frac{3(n+1)}{4} \text{th position in the rank order} = \dots\dots\dots (\text{mm})$$

$$IQR = \dots\dots\dots (\text{mm})$$

2c) Using figure 2 and your answers above, describe the dispersion of rainfall in England in 2005 (4 marks)

3) Study figure 3 which shows changes in the populations of India and China between 200 and 2050 (projected).

**Figure 3**



3a) Complete Figure 3 by adding the following data. (2 marks)

| Country | Population (millions) |
|---------|-----------------------|
| India   | 1610                  |
| China   | 1380                  |

3b) Describe the changes shown in figure 3. (4 marks)

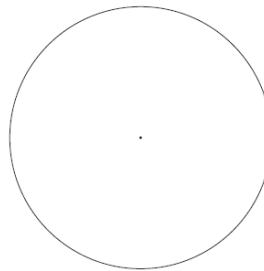
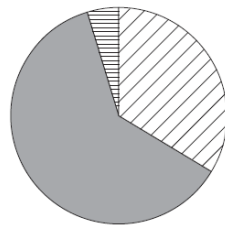
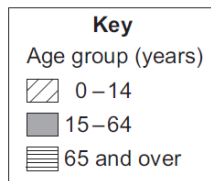
- 4) Using the information provided in figure 4 and figure 5, complete the proportionate divided circle (figure 6) to show India's projected population total and structure for 2050. (3 marks)

Figure 4

| Age group (years) | Population in 2005 (millions) | Projected population in 2050 (millions) |
|-------------------|-------------------------------|-----------------------------------------|
| 0–14              | 368                           | 302                                     |
| 15–64             | 673                           | 1016                                    |
| 65 and over       | 51                            | 292                                     |
| <b>Total</b>      | <b>1092</b>                   | <b>1610</b>                             |

Figure 5  
India's population in 2005

Figure 6  
India's population in 2050

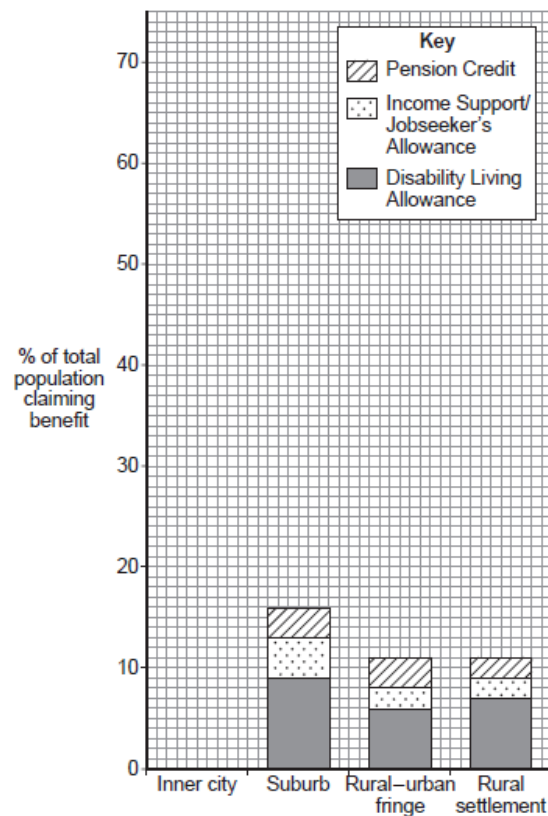


- 5) Study the photograph showing a settlement in India. Annotate the photograph to show the characteristics of the settlement. (4 marks)



- 6) Study figure 7 which shows three different types of benefit claimed by people in different areas of Merseyside in 2008.

Figure 7



- 6a) Complete figure 7 by adding the following data for the inner city area. (2 marks)

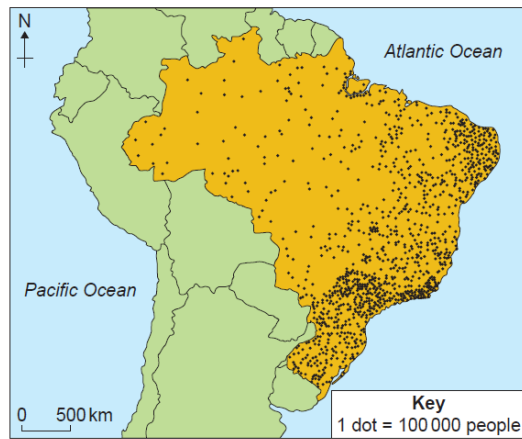
|                                        | Type of benefit             |                                      |                |
|----------------------------------------|-----------------------------|--------------------------------------|----------------|
|                                        | Disability Living Allowance | Income Support/Jobseeker's Allowance | Pension Credit |
| % of total population claiming benefit | 12                          | 23                                   | 36             |

- 6b) Using figure 7, calculate the mean percentage of Disability Living Allowance claimants for the four areas now shown. Explain why the mean is a useful measure for this set of data. (3 marks)

Mean percentage =

- 7) Study figure 8, a dot map showing the distribution of Brazil.

Figure 8



7a) Using figure 8, describe the population distribution of Brazil (3 marks)

8) Study figure 9 which shows the birth and death rates for selected countries.

Figure 9

|                                   | Brazil | Russia | India | China |
|-----------------------------------|--------|--------|-------|-------|
| Birth rate<br>(per 1000 per year) | 17.8   | 11.1   | 21.0  | 12.3  |
| Death rate<br>(per 1000 per year) | 6.4    | 16.0   | 7.5   | 7.0   |

8a) Choose an appropriate technique and display the data show in Figure 9, using the axes provided on the graph paper below. (4 marks)

