Homework Plus Mark Scheme - 3
Preparing for Exam Success

**Seek and Destroy**

1. It is unlikely that an examiner would award any marks for this answer. The reason being is that the student has only discussed possible social and environmental problems and there is little or no reference to the photograph. Additionally, the student has not linked the answer to what can be seen in the image. There appears to be no houses affected by flooding in the photograph, though there do appear to be some flats.
2. The student must discuss the economic impacts that can be seen in the image. If environmental or social points are made there needs to be a link to their economic impact.
3. Please use the mark scheme to assess the exam question.

Possible content:

* The focus of the question must be on the economic effects of river flooding. Direct interpretation of the photograph is required.
* Damage to property, which may be very costly to repair. High costs of temporary rehousing and additional travel.
* Decline in the local economy as businesses are unable to operate without power or road connections.
* Unemployment may increase if businesses are unable to fully recover from a flood.
* People are unable to travel to shops and services, or to reach work.
* Closure of roads may mean extensive detours for other traffic, which is expensive and time consuming.
* Huge cost of floods to insurers, resulting in rising premiums.

**Silky Skills**

**Getting height right**

1. The land immediately around Red Tarn is around 720m above sea level. The slopes to the south rise steeply to Striding Edge to reach a height of 900m. The highest land is found to the west of Red Tarn where the slope becomes increasingly steep until it reaches a maximum height of 950m. The land to the north east has a gentle slope down a river valley. The immediately around Red Tarn to the north and east is very gently sloping. Though it rises steeply to the south and south west. (1 for height and 1 for slope). 2x1
2. North-east
3. Image A (1 mark) – evidence includes Red Tarn being visible in the image (1), the steep, downward sloping sides either side of Striding Edge
4. 950m

**Silky Skills Revisited**

1. 2415
2. The Nab
3. 795m (must include m)
4. A592
5. Campsite
6. Bridgend
7. 3614
8. 3714
9. North East
10. Public Telephone

**Gorgeous Graphs**

1. 37

 Individual points – 1 mark (2 × 1) OR

developed point – 2 marks.

Answers could include:

| **Factor** | **Reason for increase in life expectancy** |
| --- | --- |
| Improved health care | The availability of vaccinations and reduced deaths from diseases such as dysentery has led to people living longer |
| Improved pre and post-natal care | Pregnant women in these regions now have access to healthcare facilities. This is significant because one of the leading causes of death in Nigeria is attributed to infant mortality. |
| Improved sanitation  | Improvements in sanitation have led to a reduction in outbreaks of water borne diseases such as cholera |
| Decrease in manual employment | Many primary and secondary jobs such as coal mining and steel making were arduous and dangerous, which reduced life expectancy. There has been a decline in the number of people in these jobs and an increase in office-based jobs. |
| Increased wealth | Improved living conditions and healthier diets. |
| Safety measures | Measures in both the home and work have increased life expectancy. |

1. Europe and Eurasia (1)
2. Exponential growth is shown by a j-curve. The growth is said to be exponential because it continually increases over time. (1)
3. A compound line graph (1) is appropriate for this data because data can be subdivided into two or more groups (1). It shows the total wind energy consumption as well as total by region (1).

Dazzling Data Revisited

**Mean:**

124.2+41.2+113.2+97+36.8+23.2+23.2+27.4+88.6+49+73.6+100.8 = 66.5mm

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**Median:**

|  |  |
| --- | --- |
| Month | Total Rainfall (mm) |
| June  | 23.2 |
| July | 23.2 |
| August | 27.4 |
| May  | 36.8 |
| February | 41.2 |
| October | **49** |
| November | **73.6** |
| September | 88.6 |
| April | 97 |
| December | 100.8 |
| March | 113.2 |
| January | 124.2 |

49+73.6 = 61.3mm

 2

**Mode:**

23.2mm (occurs twice)

1. Range

124.2-23.2 = 101.2mm (only award one mark if the answer is correct and includes the appropriate measurement)

**Dazzling Data**

1. Interquartile Range –

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Location | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 |
| Temperature °C | 3 | 7 | 4 | 3 | 7 | 9 | 9 | 5 | 5 | 7 | 6 |
|  | 11 | 4 | 9 | 10 | 3 | 1 | 2 | 8 | 7 | 5 | 6 |

(n+1)

 4

Therefore it is:

11+1 = 3

 4

The third number is 7°C

We now need to calculate the lower quartile range (lowest 25%):

3(n+1)

 4

Therefore it is:

3(11+1) = 9

 4

9 = 4°

We now need to subtract the lower number from the higher number

7°C -4°C = IQR of 3°C

1. It removes large anomalies from the data (1) it tells you how close the data is to the median (1)