Graphique

de Temps de Distance

**Name:** Click or tap here to enter text.

Topic

1. Translate the French title back to English to discover the topic of this task:

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| Click or tap here to enter text. |

Introduction

Graphs are used to display data and interpreting them is an important skill in many occupations. A huge amount of data is taken in the Tour de France and teams employ scientists to interpret this data and present it to the riders and team managers.

1. **Other than distance ridden, what other data would be obtained from cyclists participating in the Tour de France?**

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| Click or tap here to enter text. |

1. **Suggest why the data is displayed on a graph rather than numbers in a table?**

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| Click or tap here to enter text. |

1. **Name 3 examples of when you have seen data displayed on a graph over the past week.**

|  |  |
| --- | --- |
| **Example** | **Data displayed** |
| **One** | Click or tap here to enter text. |
| **Two** | Click or tap here to enter text. |
| **Three** | Click or tap here to enter text. |

Distance time graph

The following graph shows data from a rider in a stage of the Tour de France:

**Distance (km)**

**Time (hours)**

1. **Complete the missing values in the table below:**

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Time (hr)** | **0** | **0.5** | **1** | **1.5** | **2** | **2.5** | **3** | **3.5** | **4** |
| **Distance (km)** | # | **25** | **30** | # | **63** | **70** | **76** | # | # |

Interpretation

1. **What technology do you think was used to collect this data?**

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| Click or tap here to enter text. |

1. **How long was this stage of the Tour de France?**

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| Click or tap here to enter text. |

1. **How many hours did it take for the rider to finish the stage?**

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| Click or tap here to enter text. |

1. **The gradient on a distance time is an indication of the speed an object is going. Match the gradient to the speed in the following table:**

|  |  |
| --- | --- |
| **Gradient** | **Speed** |
| **Gradual** | Choose an item. |
| **Steep** | Choose an item. |
| **Horizontal** | Choose an item. |

1. **Indicate when the rider was:**
	1. **Traveling at their fastest:** Click or tap here to enter text.
	2. **Traveling at their slowest:** Click or tap here to enter text.
	3. **Was stopped:** Click or tap here to enter text.

The average speed can be calculated using the following formula:

$$Average speed \left(\frac{km}{h}\right)=\frac{Change in distance traveled (km)}{Change in time (hr)}$$

1. **Calculate the average speed of the rider between the following points (perform your working out on a separate page and take a photo of it when submitting your work):**
	1. **0 hr and 1 hr:** Click or tap here to enter text.
	2. **1.5 hr and 3 hr:** Click or tap here to enter text.
	3. **3 hr and 3.5 hr:** Click or tap here to enter text.
	4. **3.5 hr and 4 hr:** Click or tap here to enter text.
2. **The Tour de France is known for its mountains. Using the distance time graph, when do you believe the rider was riding uphill and downhill? Justify your answer.**

|  |  |  |
| --- | --- | --- |
| **Slope** | **Time** | **Justify your answer** |
| **Uphill** | Time | Click or tap here to enter text. |
| **Downhill** | Time | Click or tap here to enter text. |

1. **The data at the end of the graph (between 3.5 – 4 hrs) appears to be an error. Describe what you think has occurred at this point.**

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| Click or tap here to enter text. |

1. **State another occupation where the role includes graph interpretation.**

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| Click or tap here to enter text. |