[](https://www.knowitallninja.com/)Characteristics of Data & Information

# Task 1

(a) Below are some statements about data and information. Identify which of these statements is about data and which is about information by putting a tick in the relevant cell.

|  |  |  |
| --- | --- | --- |
|  | Data | Information |
| They are raw facts & figures | ✓ |  |
| They have been processed & given meaning |  | ✓ |
| It has no structure and has no purpose | ✓ |  |
| 9:00, 120/60, 10:00, 135/65, 11:00, 140/70 | ✓ |  |

(b) Fill out the boxes below in order to define what information is.

Information

Structure

Context

+

+

+

=

Meaning

Data

# Task 2

Below is a table with two different scenarios that you might need to collect and use data for. Identify an example of data & information for each scenario and fill in the relevant table cells.

|  |  |  |
| --- | --- | --- |
|  | 100m Race | Exam Mark |
| **Data** | 11.3, 10.1, 10.6, 11.0 | 70, 54, 62, 41 |
| **Information** | |  |  | | --- | --- | | **Runner** | **Time** | | Runner 2 | 10.1 | | Runner 3 | 10.6 | | Runner 4 | 11.0 | | Runner 1 | 11.3 | | |  |  | | --- | --- | | **Student** | **Time** | | Student 1 | 70% | | Student 3 | 62% | | Student 2 | 54% | | Student 4 | 41% | |

# Task 3

(a) It is said that data is meaningless without converting it into information. In the context of a scientist using data, explain why they need to convert the data into information to give it meaning.

The scientist’s data would just be raw facts and figures, such as numbers that were recorded during experiments. These numbers alone would not provide any insight into the results of the experiments so we couldn’t discover anything. By processing the data and giving it context to turn it into information we can understand what the numbers mean and discover things from it.

(b) To convert data into information it has to be processed. Can you identify three different types of processing we might perform on data?

1 Calculations (e.g. calculating an average)

2 Comparisons (e.g. is one value greater than another value)

3 Sorting (e.g. from highest to lowest)

(c) To convert data into information we must give the data context. What do we mean by giving it context?

Context tells us the circumstances in which the data was collected. It will tell us whether the values we have are in seconds, minutes, centimetres, miles, percentages, etc. and what event the data was collected from such as a race, test, etc.