**Chapter 2 : Maths statistics (1)**

**What is frequency ?**

**Definition :** Frequency is the number of times a particular value occurs in a set of data. Usually we would record the frequency of data in a frequency table.

* **Example 1 :** Using the key : H = Hockey, B = Badminton, F = Football, each letter below indicates a student joining the sports club. There is 20 students.

H H B F B H F F H B B B H F H H F B H B

We can construct a frequency table for the data.

|  |  |  |  |
| --- | --- | --- | --- |
| **Sports** | **Hockey** | **Badminton** | **Football** |
| **Frequency** | 8 | 7 | 5 |
| **Sum of frequency increasing** | **8** | 8 + 7 = **15** | 15 + 5 = **20** |

**How calculate ratio or percentage ?**

* **Example 1 :** Using the key : H = Hockey, B = Badminton, F = Football, each letter below indicates a student joining the sports club. There is **20** students.

|  |  |  |  |
| --- | --- | --- | --- |
| **Sports** | **Hockey** | **Badminton** | **Football** |
| **Frequency** | 8 | 7 | 5 |
| **Ratio** |  |  |  |
| **Percentage** |  |  |  |

**How calculate a arithmetic mean ?**

**Definition :** the arithmetic mean of a set of observations is the average. It is obtained by dividing the sum of data by the number of observations.

* **Example 2 :** the arithmetic mean (average) of the following numbers: 9, 3, 7, 3, 8, 10, and 2 is . . .

Add up all the numbers. Then divide by 7 because there are 7 different numbers.

The mean is

**Exercise 1 :** Using the key : H = Hockey, B = Badminton, F = Football, each letter below indicates a student joining the sports club. There is **20** students.

|  |  |  |  |
| --- | --- | --- | --- |
| **Sports** | **Hockey** | **Badminton** | **Football** |
| **Frequency** | 8 | 7 | 5 |

Find the arithmetic mean of this data.