A Solution for the ‘Match the Matches’ Problem

From Stanburn Junior School Year 5 G&T Maths group:

Abirami and Tara said ‘to solve this problem, we need to match the graphs and then match the sets of graphs to the statements.’

Nivethiya made a chart to see which graphs matched.

|  |  |  |  |
| --- | --- | --- | --- |
|  | Tally chart | Pictogram | Frequency graph |
| 0 goals | 3 | 3 | 1 |
| 1 goal | 3 | 3 | 6 |
| 2 goals | 2 | 2 | 2 |
| 3 goals | 5 | 5 | 4 |
| 4 goals | 2 | 2 | 2 |

She wrote ‘this showed that the data from the tally chart and the pictogram matched. So therefore the data from the frequency graph and the pie chart must match.’

She also wrote ‘the way to find out which tables go to which statement is by calculating the mean, mode and median.’

Manojj wrote ‘to work this out, I had to know a few things:

* Mode is the most popular number
* Median is when all of the numbers are put in an order, smallest first, and then the middle number is the median

Sahil and Sahil defined the Mean

* Mean is when you add up all the goals, and divide it by the number of matches to work out the answer, sometimes known as the average

Dhilan found the mode, median and mean for the Tally chart and Pictogram:

Mode=3, because this was the commonest score.

Median=2, because it is the middle number in this sequence:0001112**2**3333344

Mean =the total number of goals/number of matches

 =0+0+0+1+1+1+2+2+3+3+3+3+3+4+4 then/15

 =30/15

 =2

Dilan found the mode, median and mean for the Frequency graph and Pie chart:

Mode=1, the most common score

Median=2, the middle number when the scores are put in order

 0111111**2**2333344

Mean= the average

 =(1x0)+(6x1)+(2x2)+(4x3)+(2x4)then/15 matches

 =0+6+4+12+8/15

 =30/15

 =2

Dilan wrote ‘ the answer is Beta Rovers as the Mode (1) is one less than the Mean (2) and the Mean (2) is the same as the Median (2).

Which proves that Alpha United are the Tally Chart and the Pictogram.’

We all learnt that proving it is much harder than just solving it!