



S3 / S4

Statistics

L3MS

9

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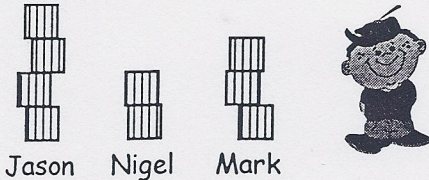
Data Calculations:

Finding the Mean (Average)

Looking at any data display graph can tell you a lot about the data, but there are some calculations you can do that will give you more information about the data, that you cannot get by just looking at a graph.

Example:

Three boys each have some blocks as shown below.



Jason Nigel Mark

How many blocks are there altogether?

If you collected all blocks and then shared them equally among the three boys, how many blocks would each boy get?

By doing this you are finding the 'average' or **mean** number of blocks that the boys would have.

Answer: The mean number of blocks each boy would have is 3.

To find the **mean** for a list of scores (numbers), there are two steps.

Step 1: **Add** up all the scores.

Step 2: **Divide** this total by the number of scores you added up.

Example: Find the **mean** of 5, 6, 7 & 10.

This would be the working: Add up the scores, $5 + 6 + 7 + 10 = 28$,
There are four scores, so divide by 4, $28 \div 4 = 7$
Answer: **Mean = 7**



Task 17

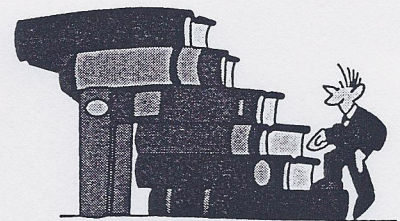
Find the **mean** (average) for each list of scores below.

- | | | |
|---------------------|------------------------|----------------------------|
| 1. 5, 9 | 2. 10, 16 | 3. 17, 13 |
| 4. 5, 8, 8 | 5. 7, 10, 13 | 6. 3, 4, 5, 8 |
| 7. 5, 8, 10, 13 | 8. 9, 9, 13, 17 | 9. 10, 30, 40, 40 |
| 10. 4, 7, 9, 12, 13 | 11. 4, 5, 8, 9, 10, 12 | 12. 3, 5, 6, 8, 6, 4, 7, 9 |

Each week the pupils in Mr. Stevenson's class are expected to read books, as part of their homework. He hopes they will read 2 or 3 books each per week. Last week this is the number of books each pupil read.

4, 3, 2, 5, 1, 3, 4, 3, 2, 3, 4, 2

- How many pupils in Mr. Stevenson's class?
- Find the **mean** number of books read by the pupils in his class.
- Would Mr. Stevenson be happy with the class mean? Explain.



Mr Stevenson gave his class a maths test on fractions, marked out of 10. Mr Stevenson said, "The class will have to do the test again, if the class mean is less than 7!" The results were as follows.

8, 5, 6, 1, 8, 8, 9, 3, 9, 6, 7, 2

- Just by looking at the results, do you think the class average is higher than 7?
- Find the **mean** of this test. Will Mr. Stevenson be pleased or not? Explain.

