

Memorable words

Hey Diddle, Diddle,
The **median**'s the middle,
We add and divide for the **mean**,
The **mode** is the one that occurs the most,
And the **range** is the difference between.

Developing methods

Match the word to the working out for the following numbers:

1, 1, 3, 3, 3, 4, 6

Mean	1, 1, 3, 3 , 3, 4, 6
Median	$\frac{1+1+3+3+3+4+6}{7} =$
Mode	6 - 1 =
Range	1, 1, <u>3</u> , <u>3</u> , <u>3</u> , 4, 6

A very Average topic

LO: Calculate different types of averages and a measure of spread.

The meanest one of all!

Find the **Mean** of the following data sets:

- (a) 5 6 3 4 4 5 3 6 1 3 1 2 7
- (b) 4 5 6 4 5 5 9 2 7 1 3 5 9
- (c) 15 23 14 15 30 16 19 22 18 23 32
- (d) 25 23 31 30 25 25 24 24 26 27 21
- (e) 54 51 54 51 54 51 54 51 54 15 54

A-D-E-I-M-N

Find the **Median** of the following data sets:

- (a) 5 6 3 4 4 5 3 6 1 3 1 2 7
- (b) 4 5 6 4 5 5 9 2 7 1 3 5 9
- (c) 15 23 14 15 30 16 19 22 18 23 32
- (d) 25 23 31 30 25 25 24 24 26 27 21
- (e) 54 51 54 51 54 51 54 51 54 15 54

Most Modest of Modes

Find the **Mode** of the following data sets:

- (a) 5 6 3 4 4 5 3 6 1 3 1 2
- (b) blue, red, blue, black, red, blue
- (c) 15 23 14 15 30 16 19 22 18 23
- (d) 25 23 31 30 25 25 24 24 26 27 21
- (e) 54 51 54 51 54 51 54 51 54 15 54

(A)E-G-N(R)

Find the **Range** of the following data sets:

- (a) 5 6 3 4 4 5 3 6 1 3 1 2
- (b) 4 5 6 4 5 5 9 2 7 1 3 5
- (c) 15 23 14 15 30 16 19 22 18 23
- (d) 25 23 31 30 25 25 24 24 26 27 21
- (e) 54 51 54 51 54 51 54 51 54 15 54

Mode

Median

Range

Mean



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The Puzzling Page

Three different whole numbers have a mean of 5 and a range of 4. What are the 3 numbers?

There are 6 classes in Year 8. The mean number of pupils per class is 27. How many pupils are in Year 8?



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In Year 9 there are 156 pupils and 6 classes. What is the mean number of pupils per class?



Below are 5 cards in ascending order:

7

The range is 5.
The mode is 5
The median is 5
What are the numbers on the other cards?

Mr Linge and Mr Rimmer had a competition to see who could get the highest score in darts...blindfolded. After hours of attempts they finally stopped. Here is the data from their scores. Who is the best blind-darts player?

	Mr Linge	Mr Rimmer
	65	75
	74	20
	21	30
	34	69
	65	68

You must give evidence to support your choice.

Find the missing number (X) in each of the questions below:

- (a) Mean = 6 { 4, 5, 6, 7, 8, X}
- (b) Mean = 4 { 3, 2, 6, 5, X}
- (c) Mean = 2 { 5, 0, 4, 1, X}
- (d) Mean = 3 { 6, 5, 5, 1, 1, 1, X}
- (e) Mean = 1 { 5, 4, 4, 9, 0, X}

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From a list of 7 numbers the mean was calculated to be 6.3. If only one more number is added, what number be if the new mean is 8?



Exam Practice

Jenny sends out party invitations. The number of replies she receives each day, for the next seven days, is given below.

9 7 4 6 2 2 3

- (a) (i) Write down the mode.
Answer
- (ii) Work out the median.
.....
Answer
- (iii) After seven days Jenny has replies from half of the people invited. How many people has she invited?
Answer
- (b) After **eight** days the mean number of replies is 4.5 per day. Work out the number of replies she receives on the **eighth** day.
Answer

Five people, Arnie, Beth, Chas, Dave and Ed weigh themselves. You are given the following information about their weights.

The mean weight of Arnie, Beth and Chas is 70 kg.
The mean weight of Beth, Chas and Dave is 78 kg.
The mean weight of Chas, Dave and Ed is 77 kg.
Chas and Ed weigh the same.
Arnie weighs 75 kg.

Find the weights of the other four people.

Jane and Mitzi have both done the same number of practice papers for their mathematics examination. They both have the same total mark, 7. They do one more practice paper. Jane scores 89 and her average score increases to 88. Mitzi scores 57 and her average score decreases to 64.

Find the final number of practice papers taken by each student. You **must** show your working.