### Memorable words

Hev 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

Median

1+1+3+3+3+4+6

Mode

Range

1, 1, 3(3,)3, 4, 6

6 - 1 =

1, 1, 3, 3, 3, 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:

- 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
- 15 23 14 15 30 16 19 22 18 23 32
- 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-F-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
- 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

## Mode

Median

Range

Mean

### **Most Modest of Modes**

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

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

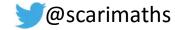
Find the **Range** of the following data sets:

- 5 6 3 4 4 5 3 6 1 3 1 2 (a)
- (b) 456455927135
- 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



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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:



The range is 5.
The mode is 5

The median is 5

What are the numbers on the other cards?

## The Puzzling Page

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?



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?















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# **Exam Practice**

Jenny sends out party invitations

The number of replie	s she receives (	each day, for the	next seven days,	is given below.
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(a) (i) Write down the mode.

Answer	
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<ol><li>ii) Work out the median.</li></ol>
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(iii) After seven days Jenny has replies from half of the people invited.

Answer

0			
Answer			

After eight days the mean number of replies is 4.5 per day.

How many people has she invited?

Work out the	number of replies	che 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 76 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, T.

They do one more practice paper.

Jane scores 89 and her average score increases to 68.

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.