

## Apply understanding of the mean

## WORKED EXAMPLE

Three children won some sweets at the fair.

Jane won 20 sweets, Callum won 10 sweets and Emma won 9.

Their mum insisted that they share them equally.

How many sweets did each child get?

In this problem, we find out how many sweets each would get if we combined and then shared them fairly between the three children.

We call the amount each child gets after sharing here the 'mean average'.

To find the **mean** average, we can find the sum of amounts and divide by the number of amounts.

20	10	9
13	13	13

The **mean** number of sweets won by the children at the fair was 13.

## REHEARSE

Ellen, Luke, and William collected some shells, pebbles, and small pieces of driftwood in their buckets.

Find the mean number of pebbles, shells and driftwood collected by the children.

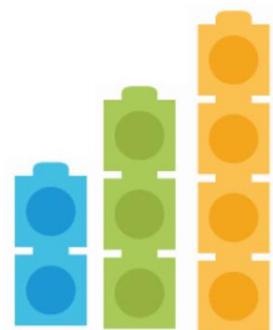
	Shells	Pebbles	Driftwood
<b>Ellen</b>	6	12	3
<b>Luke</b>	8	4	8
<b>William</b>	7	8	4
<b>mean average</b>			



## APPLY AND EXPLORE

Rose says that if you add any three consecutive numbers, their mean is always a multiple of three.

Explain why she is correct.



Consecutive numbers are whole numbers that follow each other in order.  
For example: 2, 3, 4

## REHEARSE

Mr Carfax has noticed how short the pencils in his classroom have become. The table below shows the lengths of pencils for each table group.

<p><u>Red table group</u></p> <p>5cm, 7cm, 6cm, 6cm.</p> <p>Mean length _____ cm.</p>	<p><u>Blue table group</u></p> <p>3cm, 8cm, 7cm, 6cm</p> <p>Mean length _____ cm.</p>
<p><u>Yellow table group</u></p> <p>5cm, 5cm, 10cm, 4cm, 3cm, 3cm</p> <p>Mean length _____ cm.</p>	<p><u>Green table group</u></p> <p>5cm, 3cm, 4cm, 7cm, 3cm, 4cm, 2cm</p> <p>Mean length _____ cm.</p>

Look at the pencil lengths from each group and predict which table will have the longest mean length.

Prediction:

Reason for prediction:

Now find the mean lengths.

Was your prediction correct? Explain your thinking.

## RETRIEVE

### Can I still find square and cubed numbers?

Here are some ways that children tried to find the number that is  $25^3$ . Circle the correct calculation.

$25 + 25 + 25$

$25 \times 3$

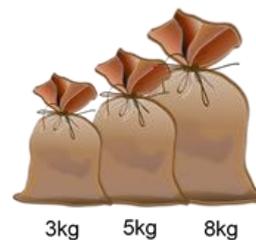
$25 \times 25 \times 25$

$25 \times 25$

Choose one of the incorrect calculations and explain what went wrong.

## APPLY AND EXPLORE

Rice is packed in sacks with masses of 3kg, 5kg or 8kg. Here are the mean amounts of rice that three delivery vans are carrying. How many sacks of rice could each van be carrying and what could their masses be?



A. Mean mass of rice	B. Mean mass of rice	C. Mean mass of rice
6kg	4kg	5.5kg

Compare your solutions with others. Was your solution the only possible one each time?

## RETRIEVE

**Can I still describe sequences?**

Here is part of a number sequence:

... 25, 40, 55, 70, 85 ...

Will the number 140 be in the sequence?

Will the number -20 be in the sequence if we continue it backwards?