TIPS AND **HINTS** FROM OUR CHARACTERS

1 Professor Transformer put the number 3 into one of his machines.
He put the number that came out back into the same machine.
He did this one more time.
He got 24.
What did the machine do?

2 What is my number?

a I think of a number.
I multiply it by 4 and add 7.
The answer is 31.
What was the number I thought of?

b I think of a number.
I subtract 5.
I divide it by 3.
The answer is 6.
What was the number I thought of?

3 Think of a number.
Add 8.
Double your answer.
Take away 6.
Halve the answer.
Take away the number you first thought of.
What did you get?

Try this many times with different numbers.
What happens?

Challenge
Try to work out why this happens.

What's missing?

Letters are often used to stand for an unknown amount in an equation.
Strip diagrams can be used to help us see the parts of the problem clearly.
If there is only one unknown amount, we can find what it is.

Example

Jane ran 4 km on Monday.
She ran 25 km altogether this week.
How far had she run in total on the other days?

Jane wrote $4 + x = 25$

This strip diagram shows either $4 + x = 25$ *or* $x = 25 - 4$.

x	4
25	

This could also be written as $25 - 4 = x$
$x = 21$.

Discusssion
- What did Jane use x to stand for?

Being able to show an equation with a diagram will help when the numbers are bigger.

Estimating and measuring

Benchmarks are lengths, weights
They are helpful when estimating

Examples

My arm is
The teacher's
arms long so it

A man is about 2 m tall.
That tree is between 3 and 4 m high.

It is a good idea to estimate first when measuring.

Standard units are used to make an **accurate** measurement.

Example A metre is a standard unit for length.

Discussion
- What other standard units are there for these?

a length **b** weight **c** capacity