

Number Juggling

You need: a calculator (optional)

ACTIVITY

Here are two number challenges.

Find out how each challenge works by following the steps several times for each challenge.

Use a different starting number each time. Discuss the challenges with a classmate.

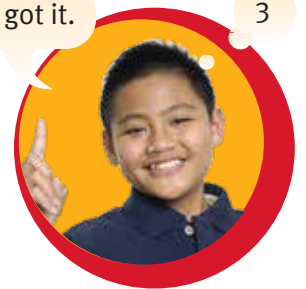
Challenge One

Step 1

Think of a number that's not too big.
Write it down but don't let me see it!

OK, got it.

3

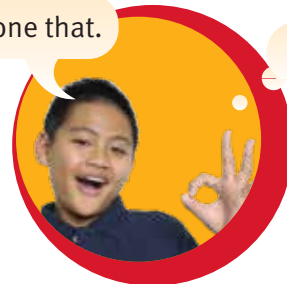


Step 2

Multiply it by 2.

Done that.

6

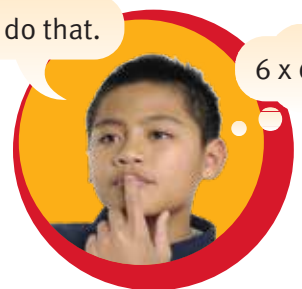


Step 3

Multiply your last answer by itself.

Hmm ... yes, I can do that.

$6 \times 6 = 36$

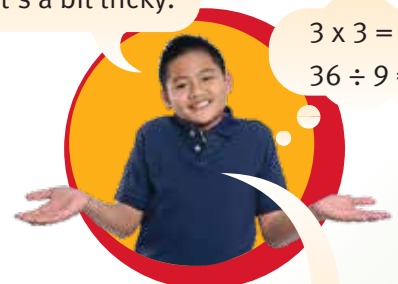


Step 4

Now divide by the square of the number
you first thought of.

That's a bit tricky.

$3 \times 3 = 9$
 $36 \div 9 = 4$



Your answer must be 4.

That's really clever!

Challenge Two

Step 1

Now I've got one for you ... Think of a whole number.
Write it down.

All right.

5

Step 2

Take away 3.

Easy!

$$5 - 3 = 2$$

Step 3

Multiply the answer by itself.

No problem!

4

Step 4

Now add 6 times your starting number.

Getting harder ...
Yes, done that.

$$6 \times 5 = 30;$$
$$4 + 30 = 34$$

Step 5

Take away the square of your
starting number.

Right. I'm glad I wrote my starting number
down. Got it.

$$34 - (5 \times 5) = 9$$

Your answer is 9!

I see what you did!

Use what you have found out to make up your own "think of a number" challenges.