Check your understanding: *Questions*

Describe in words what happens to a number when we multiply by 10.

Now explain WHY it happens – you may draw a picture if it helps.

Write the missing numbers:

(a) ☐ x 10 = 550

(b) 100 x 39 = ☐

(c) ☐ ÷ 10 = 60

(d) 17 x ☐ = 170

(e) 500 ÷ ☐ = 5

(f) ☐ x 10 = 990

Write the result number in each chain:

5 x 100 ÷ 10 x 10 ÷ 100 = ☐

300 ÷ 10 ÷ 10 x 10 x 10 = ☐

40 x 10 ÷ 100 x 10 = ☐

Invent your own chain where you end up back at your starting number.

Check your understanding: *Answers*

Describe in words what happens to a number when we multiply by 10. The digits each move one place to the left and a zero is put in the 1s place as a place holder for the other digits.

Now explain WHY it happens – you may draw a picture if it helps.

Each digit becomes ten times greater, so multiplying 73 by 10 the '7' increases in value from 70 to 700 and the '3' from 3 to 30. This can be seen by moving digits on a place grid:

100s	10s	1s
	7	3
7	3	0

Write the missing numbers:

(a) 55 x 10 = 550   (b) 100 x 39 = 3900

(c) 600 ÷ 10 = 60   (d) 17 x 10 = 170

(e) 500 ÷ 100 = 5   (f) 99 x 10 = 990

Write the result number in each chain:

5 x 100 ÷ 10 x 10 ÷ 100 = 5

300 ÷ 10 ÷ 10 x 10 x 10 = 300

40 x 10 ÷ 100 x 10 = 40

In each case, the initial number has been multiplied and divided by the same number.

Do children's own chains 'work', by ending back at their chosen starting number? Use a calculator to check if unsure…