

CALCULATIONS

Pupils should be taught to:

Know multiplication facts by heart and derive quickly the corresponding division facts

Know by heart or derive rapidly doubles and halves

As outcomes, Year 4 pupils should, for example:

Know by heart multiplication facts for the 2, 3, 4, 5 and 10 times-tables, up to $\times 10$, including multiplication by 0 and 1, and begin to know them for the 6, 7, 8 and 9 times-tables.

Derive quickly the corresponding division facts.

Respond rapidly to oral or written questions like:

- Nine fives.
- 3 times 7... times 0.
- 4 multiplied by 8... by 0.
- Multiply 9 by 5... by 1.

Respond quickly to questions like:

- Divide 36 by 4.
- What is 24 shared between 3?
- How many fives in 55?
- Half of 17.
- One quarter of 3.

Use, read and write:

double, twice, half, halve, whole, divide by 2, divide into 2... and $\frac{1}{2}$ as one half.

Understand that halving is the inverse of doubling: for example, if half of 18 is 9, then double 9 is 18.

Know by heart or derive quickly:

- doubles of all numbers 1 to 50;
 - doubles of multiples of 10 up to 500;
 - doubles of multiples of 100 up to 5000;
- and all the corresponding halves.

Respond rapidly to oral or written questions like:

- Double 19... 75... 350... 4200...
- Half of 38... of 150... of 700... of 8400...
- $\frac{1}{2}$ of 700... of 34...
- Twice 95.
- Jo spent half of her £21.60 savings.
How much did she spend?
- How many metres is half a kilometre?

Complete written questions, for example:

- working quickly, using known facts:
 $60 \times 2 = \square$ $160 \div \square = 80$
- using cubes or a number line, then mental strategies:
 $74 \times 2 = \square$ $72 \div 2 = \square$ $\square \times 2 = 126$ $\square \div 2 = 37$