

Number Bonds to 100 (Know fluently)

(Yr 2 = number bonds to 20 and Yr 4 = number bonds to 100)

E.g.

$50 + 0 = 50$

$49 + 1 = 50$

$100 + 0 = 100$

$49 + 51 = 100$

$100 - 99 = 1 \quad 50 - 49 = 1$

Number Bonds to 100 (multiples of 5)

(Yr 2 = multiples of 10 to 100)

E.g.

$100 + 0 = 100 \text{ AND } 100 - 0 = 100$

$95 + 5 = 100 \quad 100 - 5 = 95$

$90 + 10 = 100 \quad 100 - 10 = 90$

$5 + 95 = 100 \quad 100 - 95 = 5$

$0 + 100 = 100 \quad 100 - 100 = 0$

Doubles and Halves to 100

E.g.

$\text{Double } 1 = 2 \text{ AND Half of } 2 = 1$

$\text{Double } 2 = 4 \text{ Half of } 4 = 2$

$\text{Double } 25 = 50 \text{ Half of } 50 = 25$

$\text{Double } 42 = 84 \text{ Half of } 84 = 42$

3, 4 and 8 times tables

(Yr 2 = 2, 5 and 10 times tables, and Yr 4 = 7, 8 and 9 times tables)

E.g.

$0 \times 3 = 0 \text{ AND } 0 \div 3 = 0$

$1 \times 3 = 3 \quad 3 \div 3 = 1$

$2 \times 3 = 6 \quad 6 \div 3 = 2$

$11 \times 3 = 33 \quad 33 \div 3 = 11$

$12 \times 3 = 36 \quad 36 \div 3 = 12$

Multiplying by 10

The digits shift one place to the left and 0 fills the empty column

E.g.

$24 \times 10 = 240$

When 24 is multiplied by 10, the 2 tens become 2 hundreds, the 4 units become 4 tens and there are 0 units

Dividing by 10

The digits shift one place to the right

E.g.

Say and read numbers to 1000

342

579

1000

240

261

974

Count on and back in 10's from any 2 or 3 digit number

E.g.

64, 74, 84, 94, 104, 114... 114, 104, 94, 84, 74, 64...

276, 286, 296, 306, 316... 316, 306, 296, 286, 276...

Count on and back in 100's from any 2 or 3 digit number

E.g.

32, 132, 232, 332, 432... 432, 332, 232, 132, 32...

476, 576, 676, 776... 776, 676, 576, 476...

Count in multiples of 4, 8 and 50

4, 8, 12, 16, 20 ...

50, 100, 150, 200, 250 ...

Mental Maths

Milestones

Year 3

Partition 2, 3 and 4 digit numbers

E.g.

23 = 2 tens and 3 units

$= 20 + 3$

346 = 3 hundreds, 4 tens and 6 units

units

$= 300 + 40 + 6$

2457 = 2 thousand, 4 hundreds, 5 tens, 7 units

tens, 7 units

$= 2000 + 400 + 50 + 7$

Commutative Law

Remember

$10 \times 2 = 2 \times 10 \text{ (multiplication)}$

$10 + 2 = 2 + 10 \text{ (addition)}$

(You can swap the numbers over and still get the same answer.)

BUT

$10 \div 2 \neq 2 \div 10$

$10 - 2 \neq 2 - 10$

(If you swap the numbers round, you DO NOT get the same answer)

Inverses

Multiplication is the inverse of Division

$5 \times 2 = 10 \text{ so swapping the numbers gives you } 10 \div 2 = 5 \text{ and } 10 \div 5 = 2$

Addition is the inverse of Subtraction

$6 + 4 = 10 \text{ so swapping the numbers gives you } 10 - 4 = 6 \text{ and } 10 - 6 = 4$