Mental Strategies

Addition

Mental recall of number bonds to 10, 20 and 100 3+7=10, 30+70=100

Lots of counting on and back in repeated steps of 1, 10, 100, 1000; use 100 square
86+57=143 by counting on in 10s then in 1s

Add the nearest multiple of 10, 100, 1000 and adjust 24+19 = 24+20-1 = 43

Use the relationship between + and – (inverse)

Doubles and near doubles
6+6=12 6+7= double 6 +1=13

Mental addition using partitioning and recombining
34+45 = (30+40) + (4+5) = 79

Subtraction

Mental recall of addition and subtraction facts 20-17=3, 100-?=45

Lots of counting on and back in repeated steps of 1, 10, 100, 1000; use 100 square
86-52=34 by counting back in 10s then in 1s

Subtract the nearest multiple of 10,100,1000 and adjust 24-19 = 24-20+1 = 5

Use the relationship between + and – (inverse)

Find a small difference by counting up; show on a number line

Multiplication

Doubling and halving and apply knowledge of this to known facts 8x6 is double 4x6

Using multiplication facts
Y2 → 2x 5x 10x
Y3 → 2x 3x 4x 5x 6x 10x
Y4 → recall all facts up to 12x12 **quickly**
Y5,6 → all facts up to 12x12 **in 5 seconds.**

Multiplying by 10 or 100

Use closely related facts already known
13x11 = (13x10) + (13x1)

Partitioning
23x4 = (20x4)+(3x4)

Use of factors when x a multiple of 10
8x30=240 so 8x3x10=240

Division

Doubling and halving
halving is ÷2,
halving and halving again is ÷4 / finding ¼ or 25%.

Recall division facts for times tables

Dividing by 10 or 100

Use and apply division facts
If I know 3x7=21, what else do I know?
30x7=210 0.3x7=2.1 etc