

EYFS Rapid Recall
Number names to 5
Number names to 10 (show the digit and say number)
Number names 10-20 (children say these numbers correctly - thirteen not thirty)
Count to 10 forwards and backwards
One more
One less
Partition numbers to 9
Count to 20
Order numbers to 20
Count in 10s
Count in 2s to 20
Subitise up to 5 (recognise quantities without counting)
Number bonds to 5
Double 1 to 5
Days of the week in order

Year 1 Rapid Recall and Mental Strategies
Adding 1 $1+2$ $2+1$ $1+3$ $3+1$
Doubles to 10 $1+1$, $2+2$ $5+5$
Adding 0 $1+0$ $0+1$ $2+0$ $0+2$
Adding 2 $1+2$ $2+1$ $2+2$ $2+2$ $1+3$ $3+2$
Number bonds to 10 $1+9$ $9+1$ $2+8$ $8+2$ Also seen as missing number: $6 + ? = 10$
Partition numbers to 19 19 is 10 and 9 18 is 8 and 10
Doubling and halving to 20 $6+6$ $7+7$ $10+10$
Counting to 100 in 1s and in 10s Counting on and back
Adding 10 +/- 10 to any 1 digit number including zero $0+10 = 10$ $10+7 = 17$

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<p>Near doubles $2+1$ Use doubling $2+2=4$ so $2+1=3$ $3+2\dots 10+9$ $3+4 \rightarrow$ because double 3 is 6 so it's just one more</p>
<p>Number bonds to 20 $11+9$ $9+11$ $12+8$ $8+12$ $13+7$ $7+13$</p>
<p>Adjusting: 'make ten' supported by models and images $8 + 6 = \rightarrow 8 + 2 + 4$ Start to think like this – continued into Year 2.</p>

Year 2 Rapid Recall and Mental Strategies

2, 5 and 10 times table multiplication and division facts
Counting on and back in 2s, 5s and 10s
<p>Bridging and Compensating $8+3$ reach 10 $8+2=10$ then add 1 more = 11 $9+3$ $7+4$</p>
<p>Adding 10 to a 2digit number (Use hundred square) $11+10$ $12+10$ $21+10$</p>
<p>Partitioning Calculations with whole numbers which do not involve crossing place value boundaries. $23 + 45 = ?$ $23 \rightarrow 20 + 3$ $45 \rightarrow 40 + 5$ $20+40= 60$ $3+5=8$ $60+8=68$</p>
<p>Adjusting $+9$ $+10$ then -1 -9 -10 then $+1$ $+11$ $+10$ then $+1$ -11 -10 then -1</p>
<p>Adjusting: 'make ten' supported by models and images $8 + 6 = \rightarrow 8 + 2 + 4$</p>

Year 3

Rapid Recall

3, 4 and 8 times table and associated division facts
<p>Multiply 2 digit number by 10 25×10 10×32</p>
<p>+/- multiples of 10 where the answer is between 0 and 100 $70 + 30 = 100$ $20 + 40 = 60$</p>
<p>Doubles and halves of multiples of 10 up to 100 $40+40$ $20+20$</p>
Mental Strategies
<p>Counting on or back in fives from any multiple of 5 $35+15=?$ by counting on in steps of 5 from 35</p>
Counting on or back in hundreds from any number

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570 + 300 = ? by counting on in hundreds from 570
Partitioning Calculations with whole numbers which involves crossing place value boundaries 42 - 28 = ? by 42 - 2 - 20 - 6
Adjusting multiples of 10 38 + 68 = -> 38 + 70 -> - 2 45 - 29 = -> 45 - 30 -> + 1
Adjusting: 'make ten' progressing to multiples of ten 28 + 13 = 30 + 11
Near doubles to numbers under 20 18 + 16 is double 18 then -2 or double 16 then +2
Near doubles to multiples of 10 60 + 70 is double 60 then +10 or double 70 then -10
Doubling and halving Find the doubles and halves of any two-digit number and any multiple of 10 or 100 half 680 double 73
Doubling and halving Multiply and divide by 4 by doubling/halving twice and 8 by doubling/halving again. 34 x 4 is the same as 34 x 2 x 2.

Year 4
Rapid Recall
All multiplication and division facts up to 12 x 12
+/- multiples of 10 beyond 100 50+60=110 60+70=130
+ or - multiples of 100 up to 1000 300+600=900 200+700=900
Half of any even number to 100
Multiply any 2 or 3 digit number by ten 239 x10=2390 61 x10=610
Mental Strategies
Counting on or back in tenths and/or hundredths 3.2 + 0.6 = ? by counting on in tenths. 1.7 + 0.55=? by counting on in tenths and hundredths – flexibility with a number line
Counting on and back in 25s Relate to fractions
Adjusting multiples of 10 or 100 138 + 69 = -> 138 + 70 then - 1 299 - 48 = -> 300 - 48 then - 1
Adjusting 'make ten' progressing to 3 digit numbers 128 + 32 = 130 + 30 (32 partitions to 30 and 2, add the 2 to the 128)
Partitioning Partitioning to calculate decimals splitting the 2 digit number: Calculations with decimal numbers not crossing place value boundaries then crossing boundaries. 3.2 + 2.1 Moving on to crossing boundaries: 3.7 + 6.8
Near doubles to 100 75 + 76 is double 76 then -1 or double 75 then +1.
Doubling and halving Find the doubles and halves of any number up to 1,000 by partitioning

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350+350 (300+300 then 50+50) Half of 842 (Half of 800, half of 40 and half of 2)
Bridging through 60 To calculate time intervals

Year 5 and 6

Rapid Recall

+/- multiples of 1000
2000+4000=6000

Multiply and divide any number by 10 and 100
239 x100=23,900
6130 ÷10=613

Halves of any number to 100
Half of 22 = 11
Half of 51 = 25.5

Squares of all numbers up to 12
 $2^2 = 2 \times 2 = 4$
 $12^2 = 12 \times 12 = 144$

Cubes of 2, 3, 4 and 5
 $2^3 = 2 \times 2 \times 2 = 8$
 $5^3 = 5 \times 5 \times 5 = 25 \times 5 = 125$

Multiplication of multiples of 10 and 100 based on known facts $40 \times 40 = 1,600$ ($4 \times 4 = 16$ then $\times 10$ twice)

Mental Strategies

Adjusting multiples with decimals
 $2 \frac{1}{2} + 1 \frac{3}{4} \rightarrow 2 \frac{1}{2} + 2$ then $- \frac{1}{4}$
 $5.7 + 3.9 \rightarrow 5.7 + 4.0$ then $- 0.1$

Decimal near doubles to whole numbers
 $2.5 + 2.6$ is double 2.5 then $+0.1$ or double 2.6 then -0.1

Doubling and halving
Find the doubles and halves of any number up to 10,000 by partitioning
Half of 32,202 (halving 3,000, 2000, 200 and 2)

Doubling and halving
Multiply by 50 $\rightarrow \times 100$ then $\div 2$
 $8 \times 50 = 8 \times 100$ then $\div 2$

Doubling and halving
Double and half decimal number with up to one decimal place by partitioning
Half of 8.4 \rightarrow half 8 and then half 0.4