Addition

+, add, addition, more, plus, make, sum, total, altogether, score, near, one more, two more... ten more... one hundred more, tens boundary, hundreds boundary, inverse, = equals, is the same as

EYFS

	Number bonds	Count all	Count all	Count on	Count on	1 more	Solve	Solve
Number size	O + O ≤ 10							
Facts and Recall	• number bonds 2, 3, 4 and 5							
Mental Strategies	• count on and count all • 1 more • number bonds to 2, 3, 4, 5 and 10	5 = 5 + 0 3 + 2 = 5 4 = 1 + 3 5 + 0 = 5	1, 2, 3, 4, … 5, 6. 1, 2, 3, 4, 5, 6, 7, … 8, 9.	1, 2, 3, 4, 5, … 6, 7. 1, 2, 3, 4, … 5, 6, 7	4 + 2 = 6 "Put 4 in your head, 5, 6." 4, … 5, 6, 7.	5 + 3 = 8 2 + 4 = 6 (start with bigger number)	whole part part	whole part part whole part part

Year 1

	Number bonds	Count on	Partition (composition) and recombine	Doubles	Near doubles	Writing statements	Solve	Solve
Number size	O + O TO + O ≤ 20							
Facts and Recall	• number bonds to 6, 7, 8, 9, 10 and 11							
Mental Strategies	• 1 more • 2 more • 10 more • 0 more • 10 add any number of ones • doubles to 10 • near doubles (within 10) • 3+5, 3+6, 5+3 and 6+3	14 + 4 = 8 7 + 10 = 17	8 + 5 = 13 8 + 5 = 8 + 2 + 3 = 13 3 + 9 = 12	4 + 4 = 8 3 + 3 = 6	2 + 3 = 5	6 + 3 = 9 3 + 6 = 9 9 = 6 + 3 9 = 3 + 6	3 + 4 = □ □ = 4 + 3 3 + □ = 7 7 = □ + 4 4 + □ = 7 7 = 3 + □ □ + ∇ = 7 7 = □ + ∇	whole part part whole part part

Year 2

	Partition (place value) and recombine	Partition (composition) and recombine	Add near numbers and adjusting	Adding three digits	Partitioned Column method	Column addition	Solve	Commutativity and Inverse
Number size	TO + O TO + T TO + TO O + O + O							
Facts and Recall	• addition facts to 20 fluently, and derive • the related facts up to 100 • number bonds to 12 up to 20							
Mental Strategies	• 10 more • partition second number , add tens then ones • add multiples of ten • double numbers up to 20 (and multiples of 5) • near doubles within 20 • partition and recombine • add near multiples of 10	27 + 4 = 20 + 7 + 4 = 20 + 11 = 20 + 10 + 1 = 30 + 1 = 31 23 + 12 = 20 + 3 + 10 + 2 = 30 + 5 = 35 23 + 12 = 23 + 10 + 2 = 25 + 10 = 35	36 + 8 = 36 + 4 + 4 = 40 + 4 = 44 8 + 7 = 8 + 2 + 5 = 10 + 5 = 15 48 + 36 = 84	33 + 9 = 33 + 10 – 1 = 43 – 1 = 42 45 + 38 = 45 + 40 – 2 = 85 – 2 = 83 Recognise number bonds 3 + 5 + 7 = (3 + 7) + 5 = 10 + 5 = 15 4 + 7 + 6 = (4 + 6) + 7 = 10 + 7 = 17 Largest numbers first 8 + 1 + 6 = (8 + 6) + 1 = 14 + 1 = 15	(no exchange until secure) 20 + 8 + 10 + 3 40 + 1 = 41 10	2 8 + 1 3 4 1 1	14 + 5 = 10 + □ 14 + ∇ = 17 + 5 32 + □ + ∇ = 100 ∇ = 46 + 13 + □	Commutativity 5 + 3 = 8 3 + 5 = 8 Inverse 3 + 4 = □ □ = 4 + 3 3 + □ = 7 7 = □ + 4 4 + □ = 7 7 = 3 + □ □ + ∇ = 7 7 = □ + ∇ 15+4=19 19–4=15

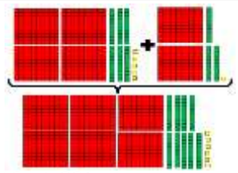
Addition

+, add, addition, more, plus, make, sum, total, altogether, score, near, one more, two more... ten more... one hundred more, tens boundary, hundreds boundary, inverse, = equals, is the same as

Year 3

Number size	HTO + O HTO + T HTO + H HTO + TO HTO + HT HTO + HTO
Facts and Recall	• addition facts to 20 fluently • number bonds of multiples of 10 to 200
Mental Strategies	• add O, T and H to TO and HTO (including bridging through boundaries) • partition second numbers to add (to + to) • pairs to 100 • use near doubles to add • rounding and adjusting near multiples of 10 and 100

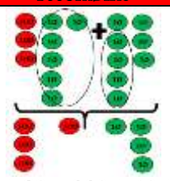
Partition (place value) and recombine



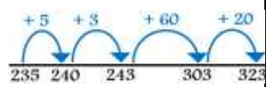
465 + 231
= 465 + 200 + 30 +1
= 466 + 200 + 30
= 496 + 200
= 696

136 + 193
= 193 + 100 + 30 + 6
= 199 + 100 + 30
= 229 + 100
= 329

Partition (composition) and recombine

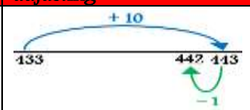


360 + 80 = 360 + 40 + 40
= 400 + 40
= 440



235 + 88
= 235 + 5 + 3 + 80
= 243 + 60 + 20
= 323

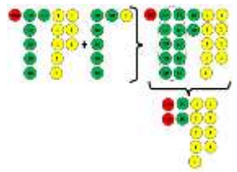
Add near numbers and adjusting



433 + 9 = 433 + 10 – 1
= 443 – 1
= 442

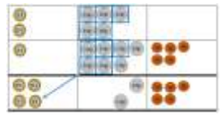
163 + 129
= 163 + 130 – 1
= 293 – 1
= 292

Column addition



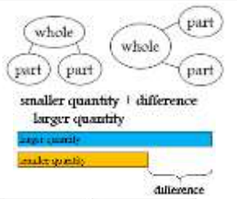
```
  1 6 8
+   6 1
  2 2 9
  1
```

Column addition



```
  £2.50
+ £1.75
  £4.25
  1
```

Solve



part	part	
whole		
part	part	333

+ 52 = 100 + □
245 + ∇ = 370 + 40
55 + □ + ∇ = 250
∇ = 123 + 80 + □

Estimate and Check

```
  1 6 8
+   6 1
  2 2 9
  1
```

```
  1
  2 2 9
– 1 6 8
  0 6 1
```

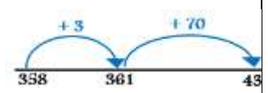
✓

Year 4

Number size	Up to ThHTO + ThHTO including numbers to 2 dp
Facts and Recall	• number bonds of multiples of 100 to 2000
Mental Strategies	• add multiples of 10s, 100s, 1000s • fluency of 2 digit + 2 digit • partition second number to add • decimal pairs of 10 and 1 • use near doubles to add • add near multiples by adjusting both numbers

Partition (place value) and recombine

5127 + 720
= 5127 + 700 + 20
= 5147 + 700
= 5847

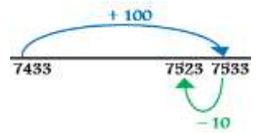


358 + 73 = 358 + 70 + 3
= 361 + 70
= 431

Partition (composition) and recombine

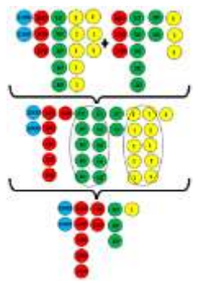
2660 + 550
= 2660 + 500 + 40 + 10
= 2700 + 300 + 200 + 10
= 3000 + 200 + 10
= 3210

Add near numbers and adjusting



7433 + 90
= 7433 + 100 – 10
= 7533 – 10
= 7523

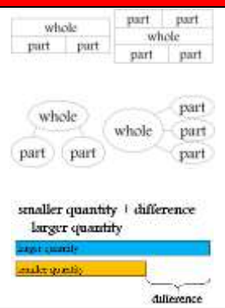
Column addition



Column addition

```
  2 3 5 8
+   3 7 3
  2 7 3 1
  1 1

  7 2.8
+ 5 4.6
  1 2 7.4
  1
```

Solve



Estimate and Check

7433 + 90
≈ 7400 + 100
≈ 7500

7433 + 90
= 7433 + 100 – 10
= 7533 – 10
= 7523

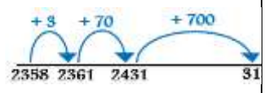
7523 – 90
= 7523 – 100 + 10
= 7423 + 10
= 7433

✓

Year 5

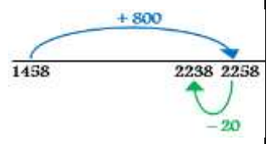
Number size	More than ThHTO + ThHTO including numbers to 3 dp
Facts and Recall	• number bonds of decimals (to 1 d.p.) to 2
Mental Strategies	• add multiples of 10s, 100s, 1000s, tenths • fluency of TO + TO including with decimals • partition second number to add • use number facts, bridging and place value • adjust numbers to add

Partition and recombine



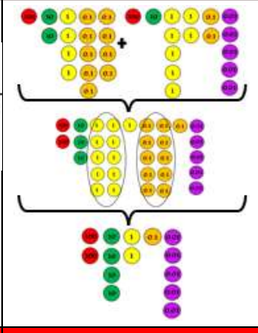
2358 + 773
= 2358 + 700 + 70 + 3
= 2361 + 700 + 70
= 2431 + 700
= 3131

Add near numbers and adjusting



1458 + 780
= 1458 + 800 – 20
= 2258 – 20
= 2238

Column addition



Column addition

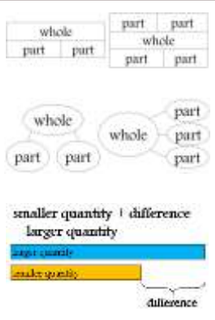
```
  1 2 4.9 0
+ 1 1 7.2 5
  2 4 2.1 5
  1 1
```

Column addition

Place holders used to ensure place value is upheld

```
  1 3.2 5
  0 4.1 3
+ 0 0.7 6
  1 8.1 4
  1 1
```

Solve



Estimate and Check

124.90 + 117.25
≈ 120 + 120
≈ 240

```
  1 2 4.9 0
+ 1 1 7.2 5
  2 4 2.1 5
  1 1
```

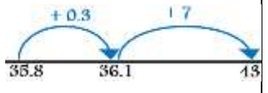
```
  3 1 1
  2 4 2.1 5
– 1 1 7.2 5
  1 2 4.9 0
```

✓

Year 6

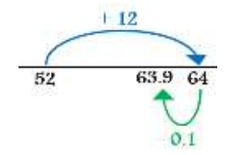
Number size	For larger numbers, including numbers to 3 dp and with mixed operations
Facts and Recall	• number bonds of decimals (to 1 d.p.) to 20 • number bonds of decimals (to 2 d.p.) to 1
Mental Strategies	• add multiples of 10s, 100s, 1000s, tenths, hundredths • fluency of 2 digit + 2 digit including with decimals • partition second number to add • use number facts, bridging and place value • adjust numbers to add

Partition and recombine



35.8 + 7.3 = 35.8 + 7 + 0.3
= 36.1 + 7
= 43.1

Add near number then adjust



52 + 11.9 = 52 + 12 – 0.1
= 64 – 0.1
= 63.9

Column addition

```
  4527899.72
+   36289.44
  4564189.16
  11111
```

Column addition

```
  23.361
   9.080
  59.770
+  1.300
  93.511
  2 1 2
```

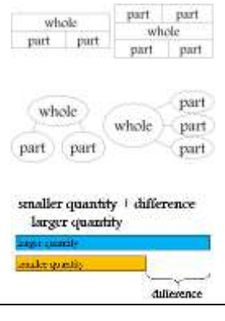
Place holders used to ensure place value is upheld

BIDMAS

B I D A
M S

Brackets; Indices; Division and Multiplication (equal); Addition and Subtraction (equal).

Solve



Estimate and Check

35.8 + 7.3
≈ 36 + 7 ≈ 43

35.8 + 7.3
= 35.8 + 7 + 0.3
= 36.1 + 7 = 43.1

43.1 – 7.3
= 43.1 – 7 – 0.3
= 42.8 – 7 = 35.8

43.1 = 43 to the nearest whole number

Subtraction

– subtract, subtraction, take (away), minus, decrease, left/left over? difference, more than/fewer than/than less is, tens boundary, hundreds boundary, inverse = equals, sign, is the same as

EYFS

		Subtraction facts	Take away and count	Count on/difference	Count on/difference	Count back	1 less	Solve	Solve
Number size	O – O								
Facts and Recall	• subtraction facts from 5	5 – 1 = 4 2 = 5 – 3 3 – 0 = 0 2 = 3 – 1	6 take away 1 leaves 1, 2, 3, 4, 5.	The difference between 8 and 5 is … 1, 2, 3	1, 2, 3.	5 – 2 = 3 "Put 5 in your head, 4, 3."			whole part part
Mental Strategies	• take away and count remainder, count on and count back • 1 less • subtraction facts from 2, 3, 4, 5 and 10		9 take away 2 leaves … 1, 2.	Yesterday, there were 4 more butterflies than today.	4 3 7 1, 2, 3	3 take away 2 is 1 Start with 3 … 2, 1.			

Year 1

		Subtraction facts	Partition (composition) and recombine	Count on	Count back	10 less	Writing statements	Solve	Solve
Number size	O – O TO (≤ 20) – O								
Facts and Recall	• subtraction facts from 5, 6, 7, 8, 9 and 10	7 – 0 = 7 0 = 7 – 7 7 – 1 = 6 1 = 7 – 6 7 – 2 = 5 2 = 7 – 5 7 – 3 = 4 3 = 7 – 4	14 – 5 = 9 14 – 4 = 10 10 – 1 = 9 13 – 7 = 6	14 – 8 = 6	11 – 4 = 7 16 – 3 = 13	18 – 10 = 8	16 – 3 = 13 16 – 13 = 3 13 = 16 – 3 3 = 16 – 13	16 - 9 = □ □ = 16 - 9 16 - □ = 7 7 = □ - 9 □ - 9 = 7 7 = 16 - □ □ - ∇ = 7 7 = □ - ∇	whole part part
Mental Strategies	• 1 less • 2 less • 10 less • count back • difference (count on) • subtract 10 (from numbers up to 20)								

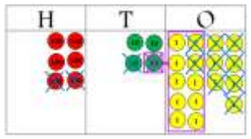
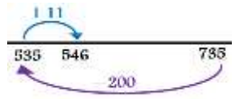
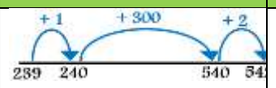
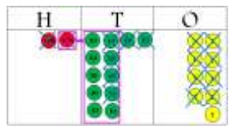
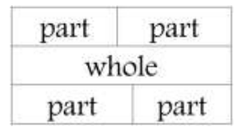
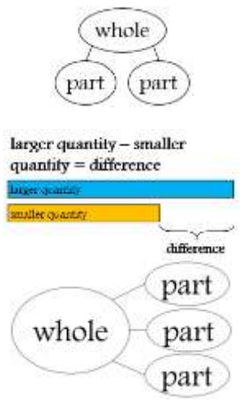
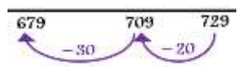
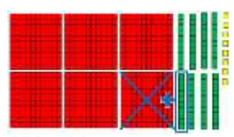
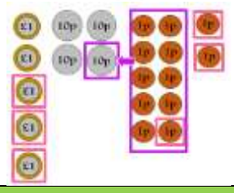
Year 2

		Partition and subtract	Subtract near numbers and adjusting	Count on	Subtract multiples of 10	Partitioned Column method (no exchange)	Column subtraction (no exchange)	Solve	Commutativity and Inverse
Number size	TO – O TO - T TO – TO								Commutativity
Facts and Recall	• subtraction facts from 12 to 20	37 – 12 = 37 – 10 – 2 = 25 – 10 = 25 68 – 13 = 68 – 10 – 3 = 65 – 10 = 55	35 – 19 = 35 – 20 + 1 = 15 + 1 = 16	42 – 39 = 3 26 – 19 = 7 57 – 35 = 22 35 + 2 + 20 = 57	43 – 30 = 13 38 – 10 = 28	47 – 13 = 34 69 – 24 = 45	40+6 20+2 20+4 46 – 22 24 46 – 22 = 24	14 – 5 = 10 – □ 14 – ∇ = 17 – 5 32 – □ – ∇ = 100 ∇ = 46 – 13 – □	whole part part part part whole part part whole part part Inverse 3 + 4 = □ □ = 4 + 3 3 + □ = 7 7 = □ + 4 4 + □ = 7 7 = 3 + □ □ + ∇ = 7 7 = □ + ∇ 15 + 4 = 19 19 – 4 = 15
Mental Strategies	• 10 less • partition second number, count back in 1s then 10s • subtract multiples of 10	13 – 7 = 13 – 3 – 4 = 10 – 4 = 6							

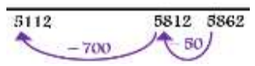
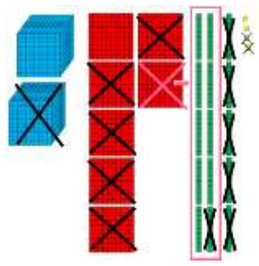
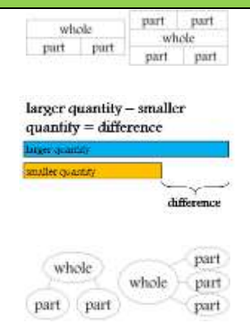
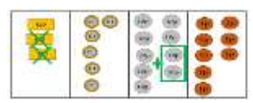
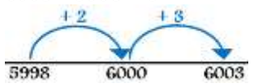
Subtraction

– subtract, subtraction, take (away), minus, decrease, left/left over? difference, more than/fewer than/than less is, tens boundary, hundreds boundary, inverse = equals, sign, is the same as

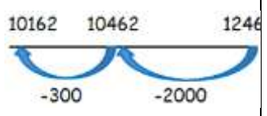
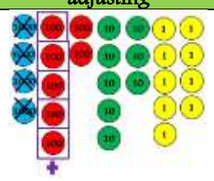
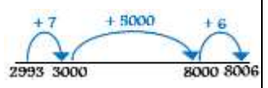
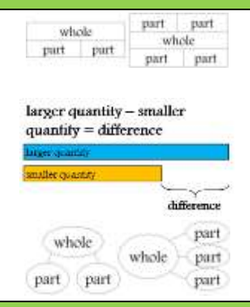
Year 3

		Partition and subtract	Subtract near numbers and adjusting	Counting up	Column subtraction	Solve	Solve	Estimate and Check
Number size	HTO – O HTO – T HTO – H HTO – TO HTO – HT HTO – HTO				458 −232 226  1 4 12 9 −168 061	333 – 52 = 300 – □ 245 – ∇ = 270 – 40 355 – □ – ∇ = 250 ∇ = 123 – 80 – □ 		735 – 189 = 735 – 200 + 11 = 535 + 11 = 546 546 +189 735 11 ✓
Facts and Recall	• subtraction facts to 20 fluently • subtraction facts of multiples of 10 to 200							
Mental Strategies	• subtract multiples of 10 and 100 • subtract single digits bridging through boundaries • partition second number • difference by counting on • subtract near multiples of 10 and 100 by rounding and adjusting	647 – 219 = 647 – 200 – 10 – 9 = 638 – 200 – 10 = 628 – 200 = 428  729 – 50 = 729 – 20 – 30 = 709 – 30 = 679	 678 – 90 = 678 – 100 + 10 = 578 + 10 = 588	 542 – 239 239 + 1 = 240 240 + 300 = 540 540 + 2 = 542 542 – 239 = 1 + 300 + 2 = 303				

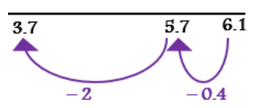
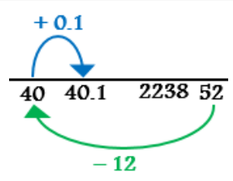
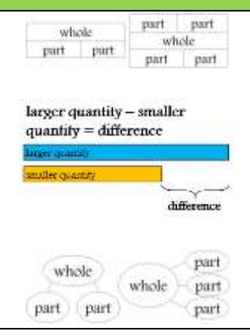
Year 4

		Partition (place value) and subtract	Subtract near numbers and adjusting	Counting up	Column subtraction	Column subtraction	Solve	Estimate and Check
Number size	Up to ThHTO – ThHTO including numbers to 2 dp		3345 – 750 = 3345 – 1000 + 250 = 2345 + 250 = 2595	6003 – 5998 = 5		2754 −1532 1222 6 2 7 15 4 −1562 1192		5862 – 750 ≈ 6000 - 1000 ≈ 5000 5112 + 750 5862 ✓
Facts and Recall	• subtraction facts of multiples of 100 from 2000							
Mental Strategies	• subtract multiples of 10, 100 and 1000 • fluency of to – to • partition second number to subtract • subtract near multiples by rounding and adjusting	5862 – 750 = 5862 – 700 – 50 = 5812 – 700 = 5112 35.73 – 2.3 = 35.73 – 2 – 0.3 = 33.73 – 0.3 = 33.43	 36.78 – 19.8 = 36.78 – 20 + 0.2 = 16.78 + 0.2 = 16.98	 4.1 – 1.9 = 4.1 – 2 + 0.1 = 2.1 + 0.1 = 2.2				

Year 5

		Partition and subtract	Subtract near numbers and adjusting	Counting up	Column subtraction	Column subtraction	Solve	Estimate and Check
Number size	More than ThHTO –ThHTO including numbers to 3 dp				2 10 4 3 1 0 5 6 − 2128 28928	5 12 2 6 3.0 − 26.5 236.5 Place holders used to ensure place value is upheld		2754 – 1562 ≈ 3000 – 2000 ≈ 1000 6 2 7 15 4 −1562 1192 1192 +1562 2754 1 ✓
Facts and Recall	• subtraction facts of decimals (to 1 d.p.) from 2							
Mental Strategies	• subtract multiples of 10s, 100s and 1000s • fluency of TO –TO including with decimals • partition second number to subtract • adjust number to subtract	12462 – 2300 = 12462 – 2000 - 300 = 12162 – 2000 = 10162	4289 – 3500 = 4289 – 4000 +500 = 289 + 500 = 789	8006 – 2993 = 5013 8.006 – 2.993 = 5.013				

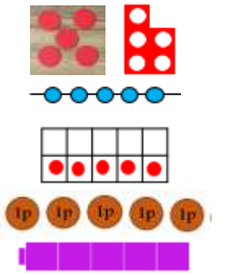
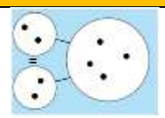
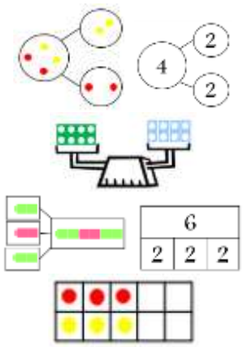
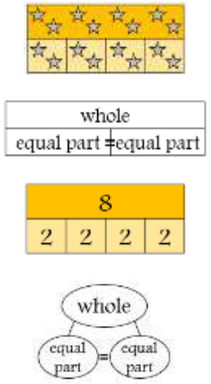
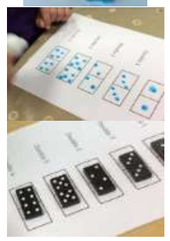
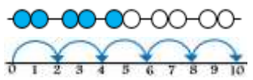
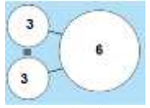
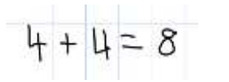
Year 6

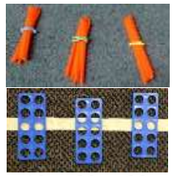
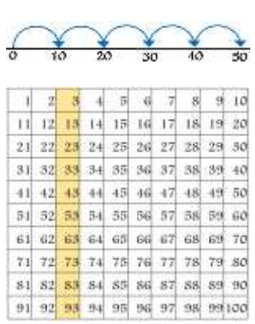
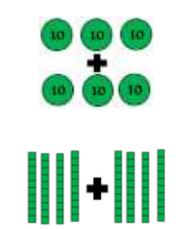
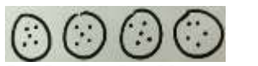
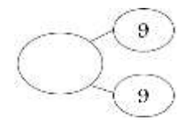
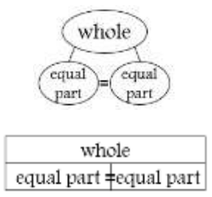
		Partition and subtract	Subtract near number then adjust	Column subtraction	Column subtraction	BIDMAS	Solve	Estimate and Check
Number size	For larger numbers, including numbers to 3 dp and with mixed operations			6 14 7 5 4 −286 468	0 9 3 1 0 5.4 1 9 kg − 36.080 kg 69.339 kg	B I D A M S Brackets; Indices; Division and Multiplication (equal); Addition and Subtraction (equal).		52 - 11.9 ≈ 50 – 10 ≈ 40 52 - 11.9 = 52 - 12 + 0.1 = 40 + 0.1 = 40.1 40.1 + 11.9 = 40.1 + 11 + 0.9 = 41 + 11 = 52 40.1= 40 to the nearest whole number
Facts and Recall	• subtraction facts of decimals (to 1 d.p.) from 20 • subtraction facts of decimals (to 2 d.p.) from 2							
Mental Strategies	• subtract multiples of 10s, 100s, 1000s, tenths and hundredths • fluency of TO – TO including with decimals • partition second number to subtract • use number facts, bridging and place value	6.1 – 2.4 = 6.1 – 2 - 0.4 = 5.7 – 2 = 3.7	52 - 11.9 = 52 - 12 + 0.1 = 40 + 0.1 = 40.1					

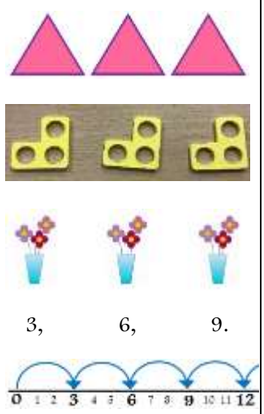
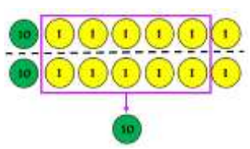
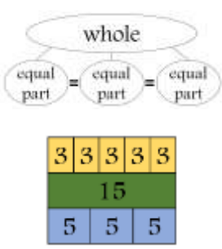
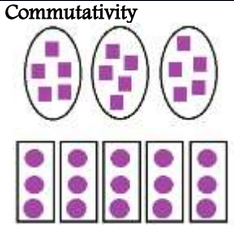
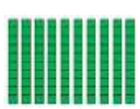
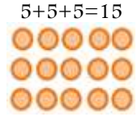
Multiplication

x lots/groups of, times, multiply, multiplication, multiplied by, multiple of, product, once, twice, … times as (big, long, wide…), repeated addition, array, row, column, double, inverse = equals, sign, is the same as

EYFS

	Count in 1s	Count in 2s	Count in 2s	Doubles	Doubles	Doubles	Solve	Solve
Number size O				 2 and 2 is 4	5 and 5 is 10			
Facts and Recall • doubles up to 5					Double 4 is 8.			
Mental Strategies • count in 1s • count in 2s	1, 2, 3, 4, 5.	2, 4, 6, 8.		 3 and 3 is 6	 4 + 4 = 8			

	Count in 5s	Count in 10s	Count in 10s	Doubles	Writing Statements	Writing Statements	Solve	Solve
Number size O x O	5, 10, 15, 20, 25, 30.	 10. 20, 30.	10, 20, 30. 		2 + 2 + 2 3 groups of 2 2 multiplied by 3 2 x 3	5 x 2 = 10 5 + 5 = 10 double 5 is 10 2 lots of 5 is 10	□ + □ + □ = 6 5 x 5 = ∇ 3 doubled is □ ∇ doubled is 12	
Facts and Recall • doubles up to 10 • double multiples of 10 up to 100	5, 10, 15, 20.				3 + 3 2 groups of 3 3 multiplied by 2 3 x 2	 5 + 5 + 5 + 5 = 20 5 x 4 = 20 5 multiplied by 4 is 20 4 lots of 5 is 20		
Mental Strategies • count in 2s • count in 5s • count in 10s	1, 5 + 1, 10 + 1, 15 + 1 1, 6, 11, 16	10, 20, 30 , 40, 50, 60, 70 , 80, 90.	3, 13, 33, 43, 53, 63 …					

	Count in 3s	Count in 4s	2x 5x 10 x (including identifying multiples)	Doubles	Writing Statements	Writing Statements	Solve	Commutativity and Inverse
Number size O x TO (≤12)		4, 8, 12.	2 + 2 + 2 + 2 + 2 = 10 2 x 5 = 10		3 x 4 = 12	5 + 5 + 5 =15 5 x 3 = 15		Commutativity  3 x 5 = 15 = 5 x 3
Facts and Recall • 2x, 5x and 10x table facts • doubles to 20			5 + 5 + 5 = 15 5 x 3 = 15					
Mental Strategies • identify multiples of 2, 5 and 10 • count in multiples of 3s • count in multiples of 4s	3, 6, 9.	4, 8, 12, 16, 20.	 10+10+10+10+10+10+10+10+10+10 = 100 10 x 10 = 100					Inverse 3 x 5 = 15 5 x 3 = 15 3+3+3+3+3=15 5+5+5=15  15 ÷ 3 = 5 15 ÷ 5 = 3 15 – 3 – 3 – 3- 3 = 3 15 – 5 – 5 = 5

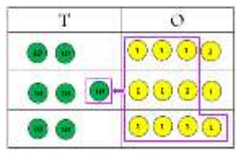
Multiplication

x lots/groups of, times, multiply, multiplication, multiplied by, multiple of, product, once, twice, … times as (big, long, wide…), repeated addition, array, row, column, double, inverse = equals, sign, is the same as

Year 3

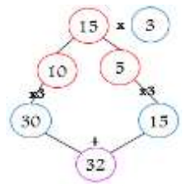
Number size	TO x O
Facts and Recall	• 3x, 4x, 6x 8x table facts
Mental Strategies	• identify multiples of 3, 4, 6 and 8 • count in multiples of 8s • double two digit numbers

Partition and Multiply



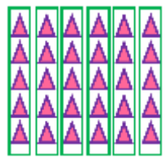
24 x 3 = 60 +12
= 60 + 10 + 2
= 72

Doubles

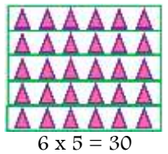


15 x 3 = (10 x 3) + (5 x 3)
= 30 + 15
= 45

Arrays



5 x 6 = 30



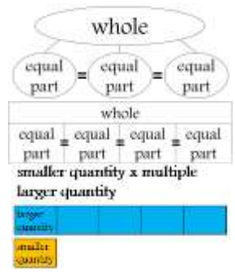
6 x 5 = 30

Grid method

x	3	
2		6
10		30 +
		36

x	3	
2	6	
10	30	+
	36	

Solve



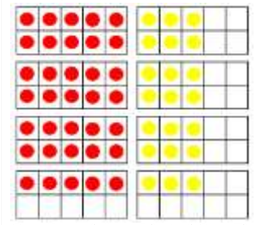
7 x 2 = □ 14 = □ x ∇
7 x □ = 14 14 = □ x 7
2 x 6 = 3 x □
10 x □ x □ = 60
12 = 2 x □ x 2

Commutativity and Distributive Law

Commutativity

4 × 12 × 5 = 4 × 5 × 12
= 20 × 12
= 240

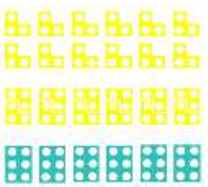
Distributive Law



8 x 7 = (5 x 7) + (3 x 7)
= 35 + 21
= 56

Check

x	3	
2	6	
10	30	+
	36	

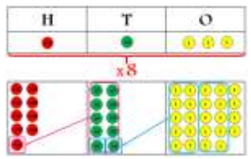


12 x 3 = 6 x 6 =
36 ✓

Year 4

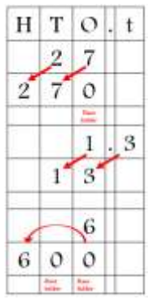
Number size	TO x O HTO x O
Facts and Recall	• all tables to 12 x
Mental Strategies	• any number x 10 • any number x 100 • double all numbers including decimals

Partition and Multiply



113 x 8
= (100x8)+(10x8)+(3x8)
= 800 + 80 + 24
= 800 + 104
= 904

Multiply any number by 10 or 100



Related Facts (multiples of 10)

3 x 5 = 15
5 x 3 = 15

50 x 3 = 150
150 = 5 x 30
50 x 3 = 30 x 5
30 x 50 = 1500

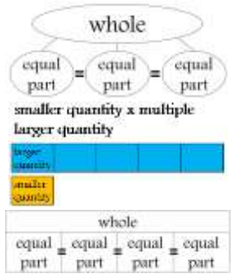
Grid method

x	7	
1	7	
30	210	+
200	1400	
	1617	

Short Multiplication

```
  452
x   3
-----
 1356
    1
```

Solve



Estimate and Check

231 x 7 ≈ 200 x 10
≈ 2000

x	7	
1	7	
30	210	+
200	1400	
	1617	

```
  0 2 3  1
7 1 6 5  7 ✓
```

Year 5

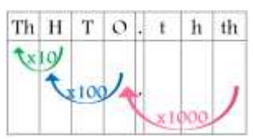
Number size	ThHTO x O ThHTO x TO
Facts and Recall	• all tables to 12 x • up to 12 x multiples of 10 to 120
Mental Strategies	• any number x 10 , x 100 and x 1000 • double all numbers including decimals • partition to multiply • identify multiples • use square numbers (²) and cube (³)

Partition and Multiply

x	10	4	
50	500	200	
200	2000	800	+
1000	10000	4000	
	12500	5000	

1250 x 14
= (1250x10) + (1250x4)
= 12500 + 5000
= 17500

Multiply any number by 10, 100 and 1000



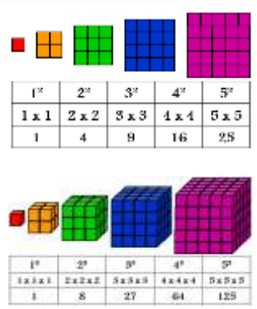
37 x 10 = 370
23.71 x 100 = 2371
2.13 x 1000 = 2130

Factors and Commutativity

4 x 35 = 4 x 5 x 7
= 20 x 7
= 140

3 x 270 = 3 x 3 x 9 x 10
= 9² x 10
= 81 x 10
= 8100

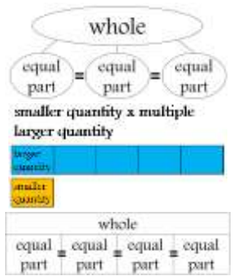
Square and Cube Numbers



Short and Long Multiplication

```
  1 2 1 3
x       8
---------
  9 9 4 4
  1 3 2

  1 2 3 4
x     1 6
---------
  7 4, 0 4
1 2 3 4 0 +
---------
1 9 7 4 4
```

Solve



Estimate and Check

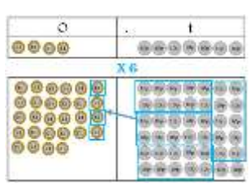
1234 x 16 ≈ 1000 x 20
≈ 20000

```
  1 2 3 4
x     1 6
---------
  7 4, 0 4
1 2 3 4 0 +
---------
1 9 7 4 4

    0 1 2 3 4
1 6 | 1 9 7 4 4 ✓
```

Year 6

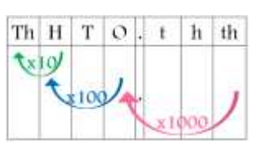
Number size	ThHTO x TO
Facts and Recall	• all tables to 12 x • up to 12 x multiples of 10 to 120 and decimals to 1 and 2 d.p. (e.g. 3 x 0.8)
Mental Strategies	• any number x 10 , x 100 and x 1000 • double all numbers including decimals • partition to multiply • identify, common multiples

Partition and Multiply



4.7 x 6
= (4 x 6) + (0.7 x 6)
= (24) + (4.2)
= 28.2

Multiply any number by 10, 100 and 1000



4.53 x 10 = 45.3
71.23 x 100 = 7123
12.452 x 1000 = 12452

Related Facts (decimals)

3 x 5 = 15
5 x 3 = 15

0.3 x 5 = 1.5
1.5 = 0.5 x 3
0.3 x 5 = 0.5 x 3
0.3 x 0.5 = 0.15

Short and Long Multiplication

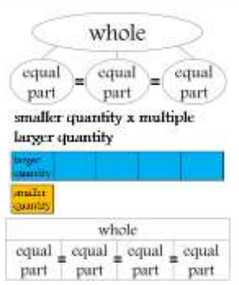
```
  3 . 1 9
x       8
---------
2 5 . 5 2
  1   7
```

BIDMAS

B I D A
M S

Brackets; Indices; Division and Multiplication (equal); Addition and Subtraction (equal).

Solve



Estimate and Check

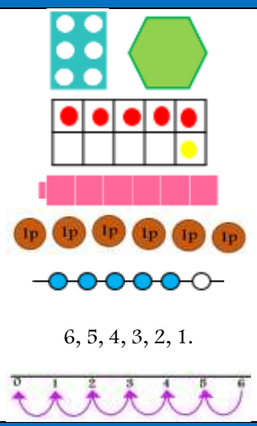
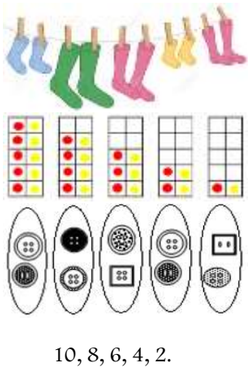
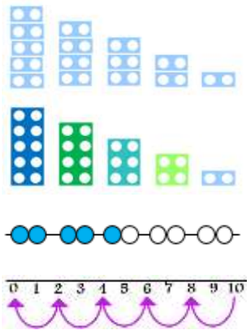
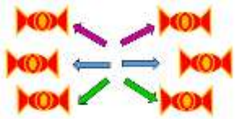
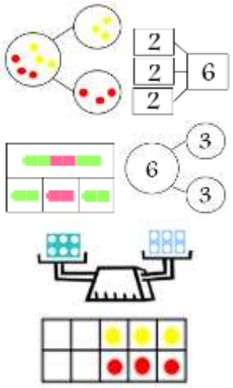
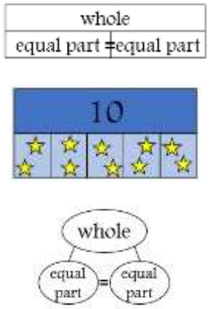
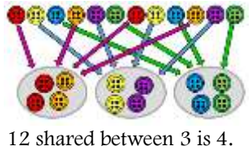
3.19 x 8 ≈ 3 x 8
≈ 24

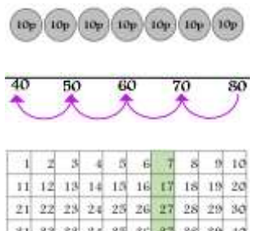
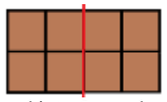
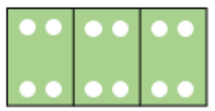
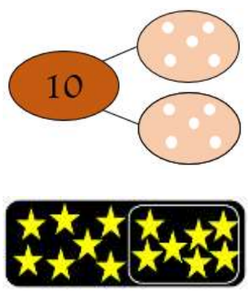
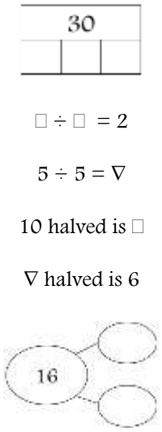
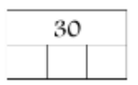
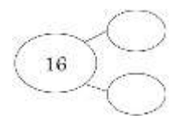
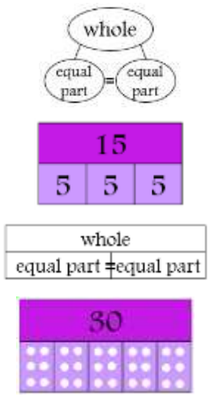
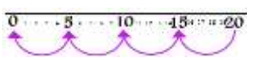
```
  3 . 1 9
x       8
---------
2 5 . 5 2
  1   7

  0 3 . 1 9
8 | 2 5 . 5 2 ✓
```

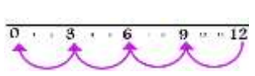
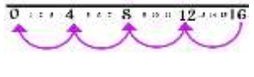
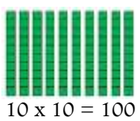
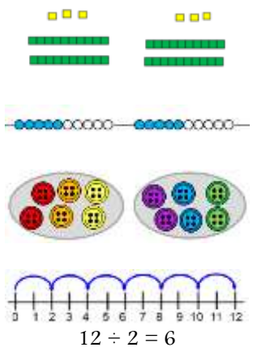
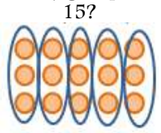
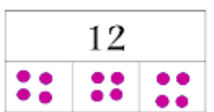
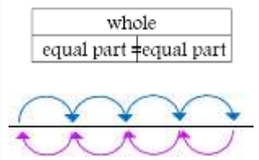
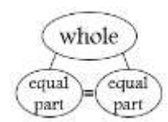
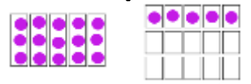
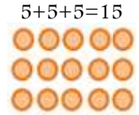
Division

array, row, column, halve, share, share equally, each… group in pairs, equal groups of, divide, division, divided by, divided into, remainder, factor, quotient, divisible by, inverse, = equals, sign, is the same as

EYFS

		Count Back in 1s	Count back in 2s	Count back in 2s	**Share** – how many in each set number of groups?	**Group** – how many groups of set size?	Halve	Solve	Solve
Number size	O				 One for you. One for me … Is it fair? How many do we each have?	How many groups of 4 are there in 12 buttons?			
Facts and Recall	• halve evens up to 10								
Mental Strategies	• count back in 1s • count back in 2s	6, 5, 4, 3, 2, 1.	10, 8, 6, 4, 2.		 12 shared between 3 is 4.	10 socks grouped into 2s gives 5 groups.			

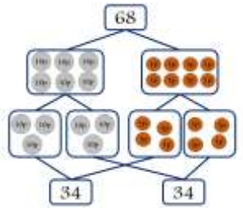
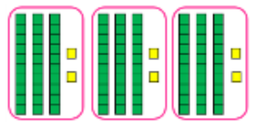
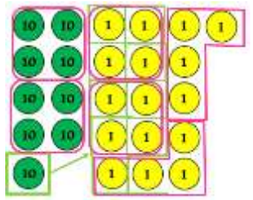
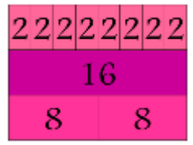
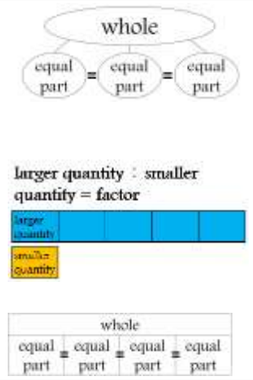
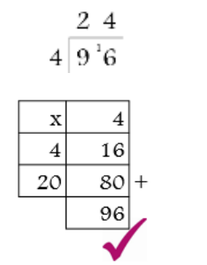
		Count Back in 5s	Count Back in 10s	**Share** – how many in each set number of groups?	**Group** – how many groups of set size?	Halve	Writing Statements	Solve	Solve
Number size	TO ÷ O	20, 15, 10, 5. 60, 55, 50, 45, 40 …	 97, 87, 77, 67, 57, 47…	 Shared into 2 equal parts  Shared into 3 equal groups Shared into 4 equal groups	How many pairs? Teams of 6. How many teams?		 40 ÷ 4 = 10 40 shared into 4 is 10 in each group. 40 divided by 4 equals 10. 6 ÷ 2 = 3 6 halved is 3. 6 grouped into 3s makes 2 groups.	 □ ÷ □ = 2 5 ÷ 5 = ∇ 10 halved is □ ∇ halved is 6 	
Facts and Recall	• halve evens up to 20 • halve multiples of 20 up to 200								
Mental Strategies	• count back in 2s • count back in 5s • count back in 10s	 25, 20, 15, 10, 5 . 20+1. 15+1, 10+1, 5+1, 1 21, 16, 11, 6, 1							

		Count Back in 3s	Count Back in 4s	2x 5x 10x division facts	Halve	Writing Statements	Writing Statements	Solve	No Commutativity and Inverse
Number size	TO ÷ O	9, 6, 3. 	20, 16, 12, 8, 4. 	2 x 5 = 10 So 10 ÷ 2 = 5 5 x 3 = 15 So 15 ÷ 3 = 5  10 x 10 = 100 So 100 ÷ 10 = 10	 12 ÷ 2 = 6	How many groups of 3 in 15?  12 ÷ 4 = 3 “12 divided by 4 equals 3” “12 shared by 4 is 3” “12 grouped into 4s is 3”	___ has been shared equally into ___ equal groups. I have ___ in each group  12 ÷ 3 = 4	 	**Commutativity**  15 ÷ 5 = 3 but 5 ÷ 15 ≠ 3 **Inverse** 3 x 5 = 15 5 x 3 = 15 3+3+3+3+3=15 5+5+5=15  15 ÷ 3 = 5 15 ÷ 5 = 3 15 – 3 – 3 – 3- 3 = 3 15 – 5 – 5 = 5
Facts and Recall	• 2x, 5x and 10x table division facts • halve even to 40 • halve multiples of 10 up to 200								
Mental Strategies	• count back in multiples of 3s • count back in multiples of 4s								

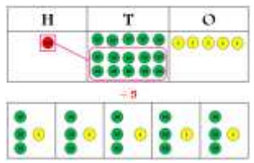
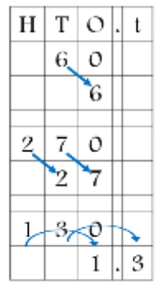
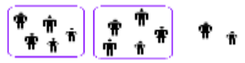
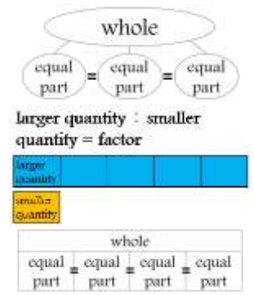
Division

array, row, column, halve, share, share equally, each… group in pairs, equal groups of, divide, division, divided by, divided into, remainder, factor, quotient, divisible by, inverse, = equals, sign, is the same as

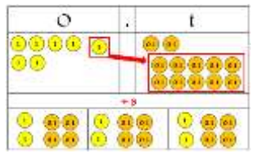
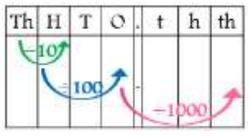
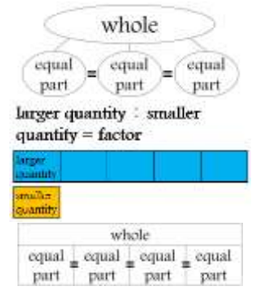
Year 3

		Partition and Divide or Chunking	Halves	Short Division	Short Division	Solve	Solve	Check
Number size	TO ÷ O	75 ÷ 5 = 15 75 − 50 (50 ÷ 5 = **10**) 25 − 20 (20 ÷ 5 = **4**) 5 (5 ÷ 5 = **1**) 10 + 4 + 1 = 15	 68 ÷ 2 = (60 ÷ 2) + (8 ÷ 2) = 30 + 4 = 34	 3 2 3 9 6	 2 4 4 9 ¹6	16 ÷ 2 = □ □ = 16 ÷ 2 16 ÷ □ = 2 2 = 16 ÷ □ □ ÷ 2 = 8 8 = □ ÷ 2 □ ÷ ∇ = 2 2 = □ ÷ ∇  12 ÷ 6 = 8 ÷ □ 10 ÷ 5 ÷ □ = 1 3 = 12 ÷ □ ÷ 2		

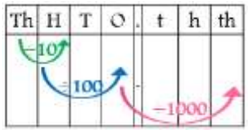
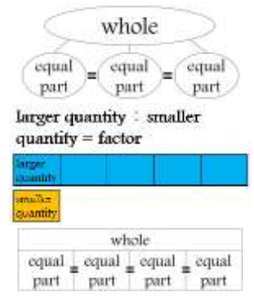
Year 4

		Partition and Divide or Chunking	Divide any number by 10 and 100	Related Facts (multiples of 10)	Remainders	Short Division	Solve	Estimate and Check
Number size	HTO ÷ O	 155 ÷ 5 = (100÷5)+(50÷5)+5÷5) = 20 + 10 + 1 = 31		15 ÷ 3 = 5 15 ÷ 5 = 3 150 ÷ 3 = 50 150 ÷ 30 = 5 1500 ÷ 30 = 50	 12 people. 5 in a taxi. How many taxis? 3  12 buttons. 5 in a bag. How many full bags? 2 	2 1 8 4 8 7 ³2 0 3 . 7 5 1 8 .³5		18.5 ÷ 5 ≈ 20 ÷ 5 ≈ 4 0 3 . 7 5 1 8 .³5 3.7 x 5 = (3 x 5) + (0.7 x 5) = 15 + 3.5 = 18.5
Facts and Recall	• all division facts of tables to 12 x							
Mental Strategies	• any number ÷10 • any number ÷10 and ÷100 • halve all numbers including decimals • recognise factor pairs							

Year 5

		Partition and Divide	Divide any number by 10, 100 and 1000	Prime Numbers (to 100)	Remainders	Short Division	Solve	Estimate and Check
Number size	ThHTO ÷ O	 7.2 ÷ 3 = (6 ÷ 3) + (1.2 ÷ 3) = 2 + 0.4 = 2.4	 37 ÷ 10 = 3.7 3800 ÷ 100 = 38 7564 ÷ 1000 = 756.4		$\frac{98}{4}$ = 4 | 9 ⁸8 .²0 2 4 r 2 4 | 9 ¹8 $2\,4\frac{2}{4} = 2\,4\frac{1}{2}$	0 8 6 r2 5 | 4 3 ³2 1 1 4 . 2 5 4 | 4 5 ¹7 .¹0²0		7256 ÷ 7 lies between 7210 ÷ 7 = 1030 and 7280 ÷ 7 = 1040 1 0 3 6 7 | 7 2 ²5 ⁴6 r4 1036 x 7 2252 + 4 = 2256 2 4
Facts and Recall	• all division facts of tables to 12 x • division facts of up to 12 x multiples of 10 to 120 • prime numbers to 19							
Mental Strategies	• any number ÷10, ÷100 and ÷1000 • halve all numbers including decimals • partition to divide • establish whether a number up to 100 is prime							

Year 6

		Partition and Divide or Chunking	Divide any number by 10, 100 and 1000	Related Facts (decimals)	Short Division	BIDMAS	Solve	Estimate and Check
Number size	ThHTO ÷ TO	4275 ÷ 12 3600 ÷ 12 = 300 600 ÷ 12 = 50 60 ÷ 12 = 5 15 ÷ 12 = 1 r 3 4275 ÷ 12 = 356 ¼	 6453 ÷ 10 = 645.3 712.3 ÷ 100 = 7.123 1245.2 ÷ 1000 = 1.2452	15 ÷ 3 = 5 15 ÷ 5 = 3 1.5 ÷ 3 = 0.5 1.5 ÷ 0.3 = 5 0.15 ÷ 3 = 0.05	0 9 5 . 2 5 8 | 7 ⁷6 ⁴2 .²0 ⁴0 0 4 8 4 1 3 | 6 ⁶2 ¹⁰9 ⁵2 13, 26, 39, 52, 65, 78, 91, 104, 117, 130	B I D A M S Brackets; Indices; Division and Multiplication (equal); Addition and Subtraction (equal).		762 ÷ 8 ≈ 800 ÷ 8 ≈ 100 0 9 5 . 2 5 8 | 7 ⁷6 ⁴2 .²0 ⁴0 95.25 x 8 = (90x8)+(5x8)+(0.25x8) = 720 + 40 + 2 = 762
Facts and Recall	• all division facts of tables to 12 x • division facts of up to 12 x multiples of 10 to 120 and decimals to 1 and 2 d.p. (e.g. 3 x 0.8)							
Mental Strategies	• any number ÷10, ÷100 and ÷1000 • halve all numbers including decimals • partition to divide • identify common factors • identify prime numbers							