Winton's Mathematical Methods and Calculation Policy

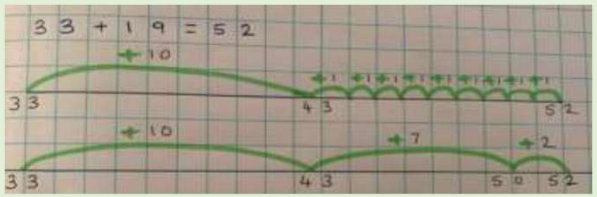
Year 3 and 4

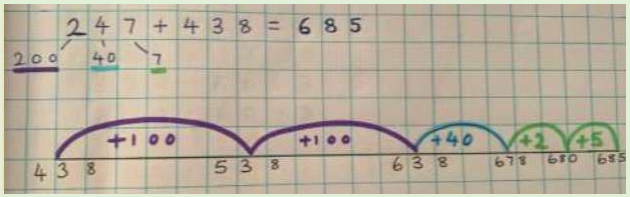
Addition +

Vocabulary

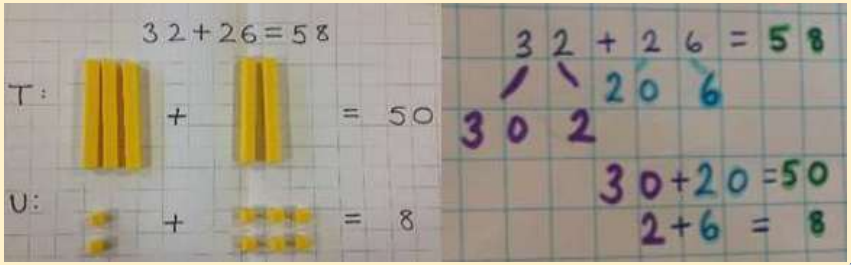
add
addend
total
increase
more
plus
make
sum
altogether
estimate
number bonds

1. Number line (bridging 10s and 100s)

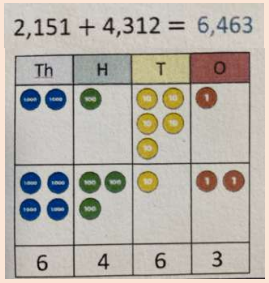




2. Partitioning

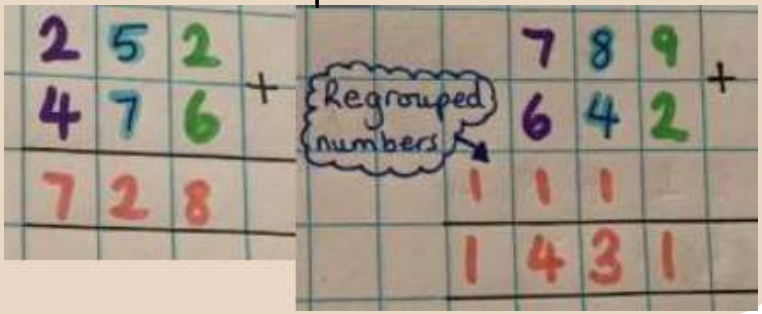


3. Expanded partitioning column with counters



4. Expanded Partitioning Column

5. Compact column

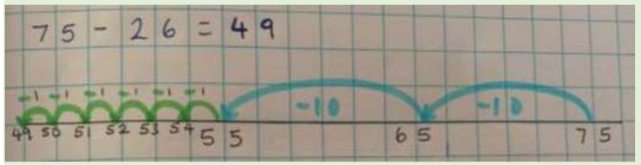


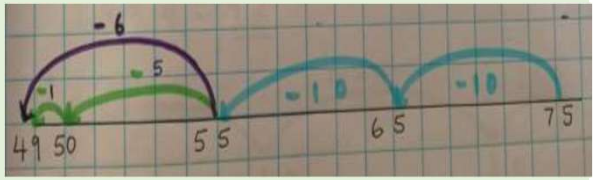
Subtraction

Vocabulary

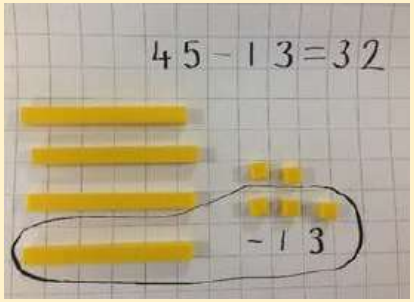
subtract
subtraction
total
decrease
less
minus
amount
estimate
difference
number bonds

1. Number line (bridging 10)

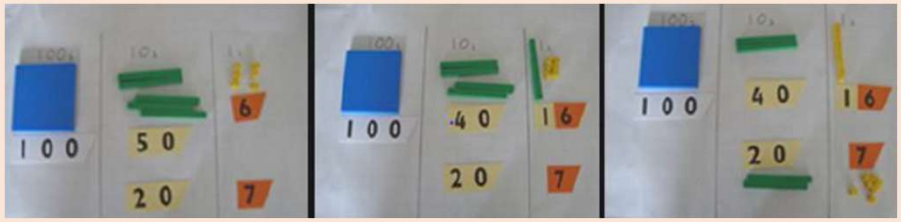




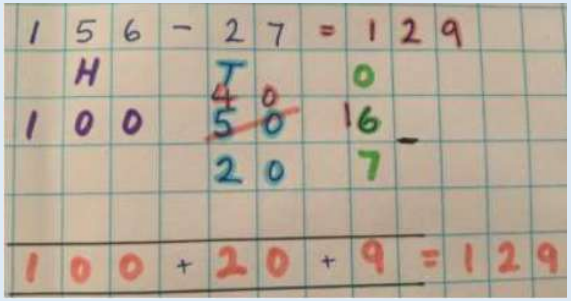
2. Partitioning



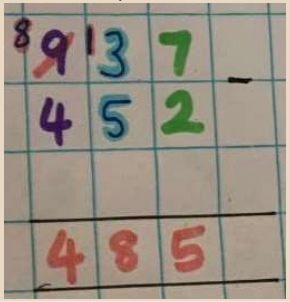
3. Expanded Partitioning Column with dienes/ counters (including exchanging)



4. Expanded Partitioning Column



5. Compact column



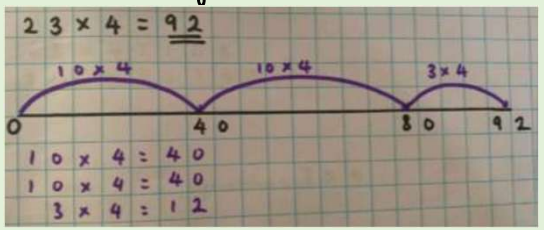
Multiplication ✖

Vocabulary

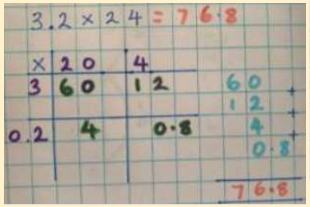
multiply
multiplier
product
lots of
inverse
factors
multiples
square
numbers

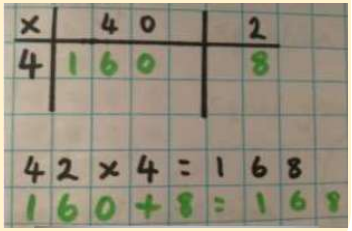
×	0	1	2	3	4	5	6	7	8	9	10	11	12	13	100
3											30				300

1. Number line using known facts

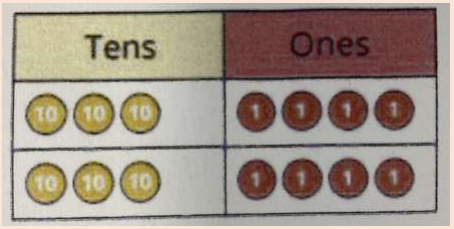


2. Grid Method



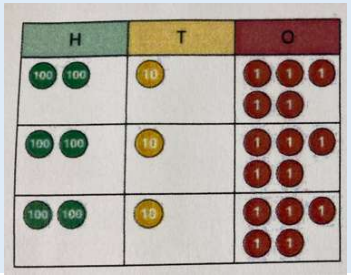


3. Counters in a column



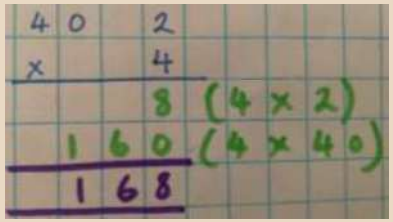
34 x 2

4. Counters in a column (bridging)



Sometimes with column method shown next to chart

5. Expanded column

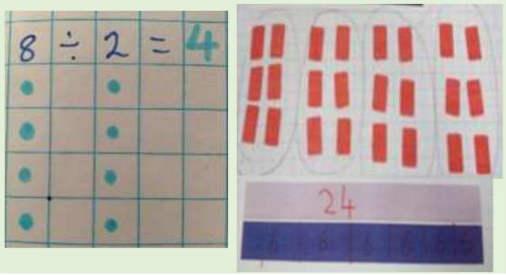


Division ÷

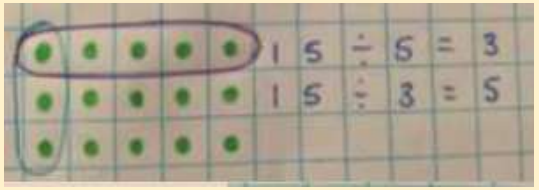
Vocabulary

divisor
dividend
quotient
share
equal
groups of
inverse
multiples

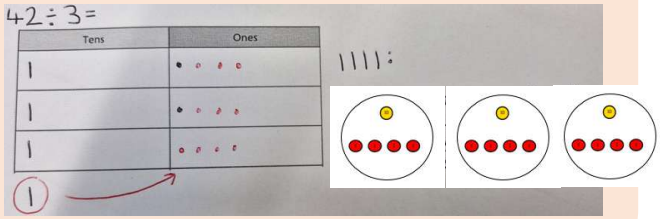
1. Sharing and arrays recap



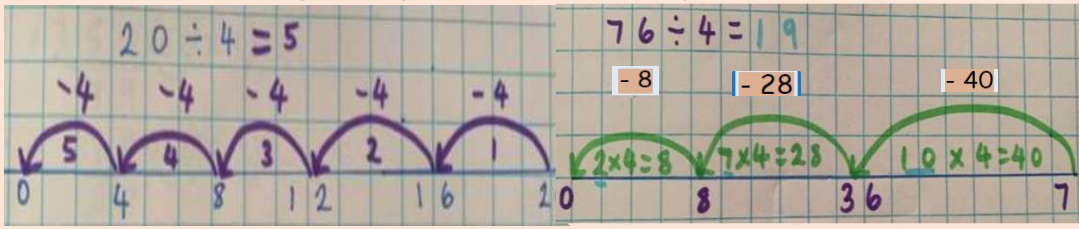
2. Arrays to show commutative



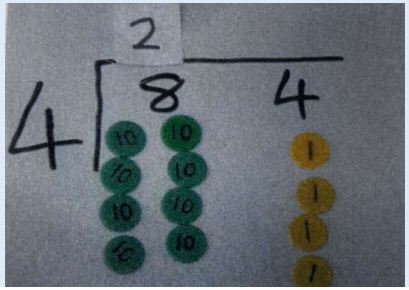
3. Divide as grouping (w/ remainders)



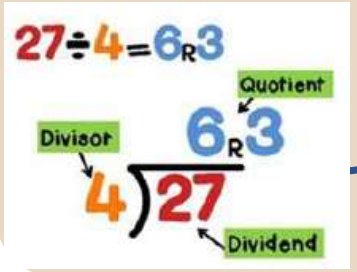
4. Subtracting using known number facts

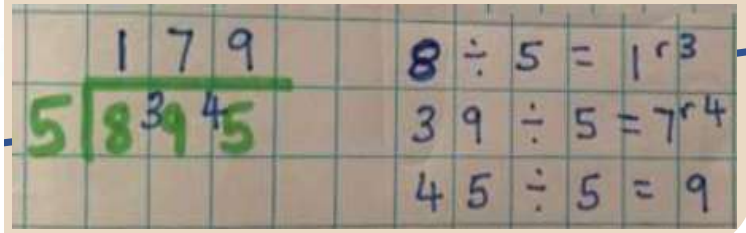


5. Bus stop for short division (with place value counters)



6. Bus stop for short division (moving onto remainders)



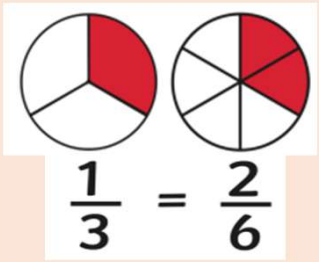


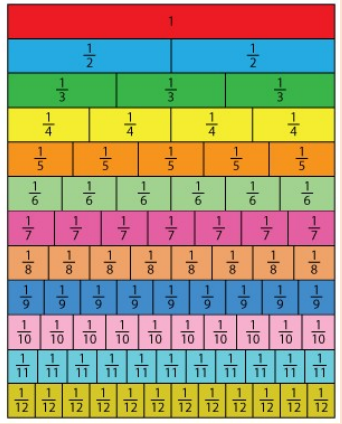
Fractions

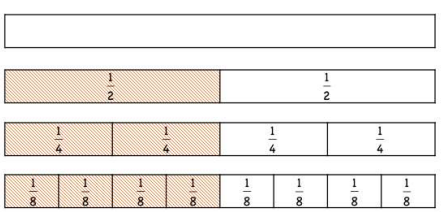
Vocabulary

numerator
denominator
unit fraction
non-unit fraction
equivalent
tenths
hundredths

Recognise and show, using diagrams, families of common equivalent fractions

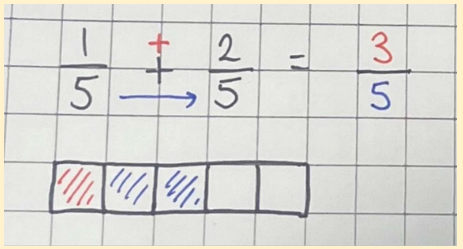


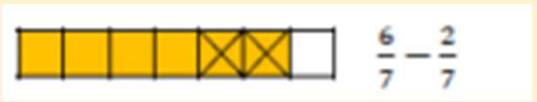




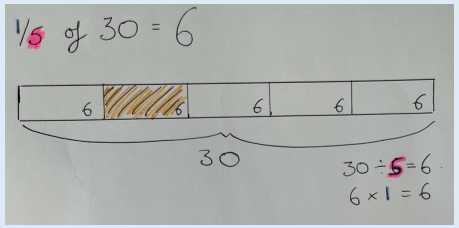
$\frac{1}{2} = \frac{2}{4} = \frac{4}{8}$

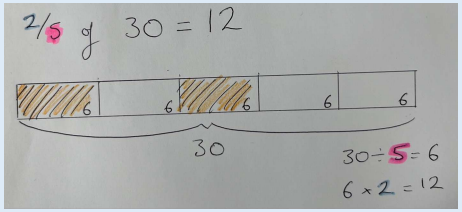
Add and subtract fractions with the same denominators





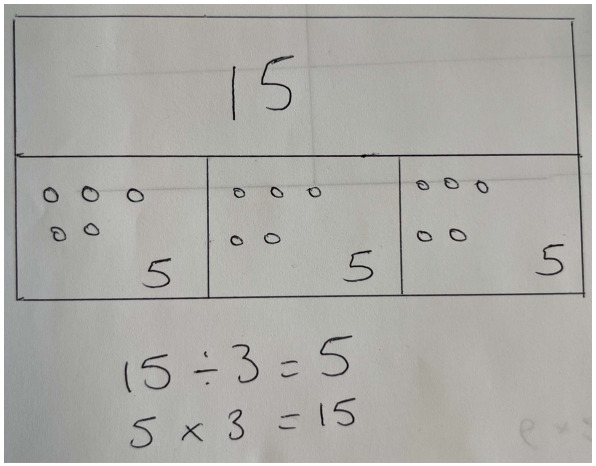
Solve problems involving increasingly harder fractions to calculate quantities, and fractions to divide quantities, including non-unit fractions where the answer is a whole number.





Number Facts

Use inverse operations to check answers to a calculation.



Multiplying and Dividing by 10, 100

1000	100	10	1	$\frac{1}{10}$	$\frac{1}{100}$

Multiplying

X 10 digits move LEFT **1** space
X 100 digits move LEFT **2** spaces

Dividing

÷ 10 digits move RIGHT **1** space
÷ 100 digits move RIGHT **2** spaces

1 whole									
½ or 0.5					½ or 0.5				
¼ or 0.25		¼ or 0.25			¼ or 0.25		¼ or 0.25		
1/10 or 0.1	1/10 or 0.1	1/10 or 0.1	1/10 or 0.1	1/10 or 0.1	1/10 or 0.1	1/10 or 0.1	1/10 or 0.1	1/10 or 0.1	1/10 or 0.1

Measure Facts

1km = 1000m

1m = 100cm

1000g = 1kg

10cm = $\frac{1}{10}$ m = 0.1m = 100mm

1cm = $\frac{1}{100}$ m = 0.01m = 10 mm

100 g = $\frac{1}{10}$ kg = 0.1 kg

1.1 kg = 1kg 100g = 1kg + $\frac{1}{10}$ kg

Additional areas

Time

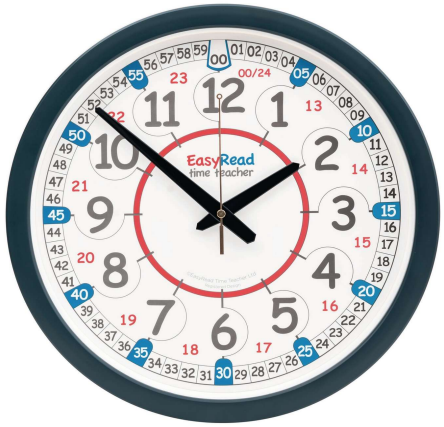
24 hours - 1 day

48 hours - 2 days

60 minutes - 1 hour

120 minutes - 2 hour

90 minutes - $1\frac{1}{2}$ hours



Money Facts

£5.00 x 2 = £10.00

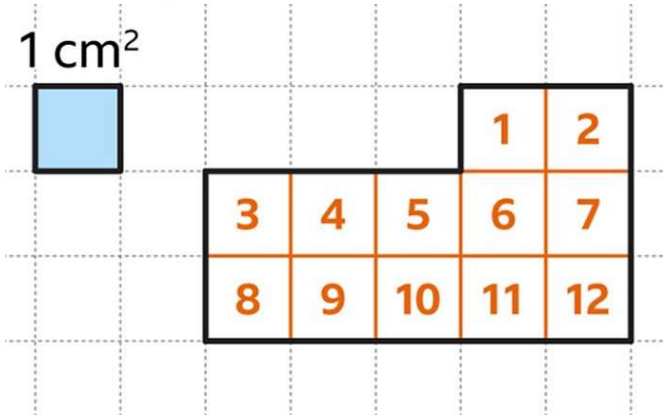
£500 x 2 = £1000

£2.50 x 4 = £10.00

£250 x 4 = £1000

£2.00 x 5 = £10.00

£200 x 5 = £1000



Area = 12cm²

Perimeter = 20cm

4+6 = 10

4+2+2+2 = 10