DIVISION: Y1

Understanding the operation and vocabulary	Mental Calculations	Recording
Understanding the operation Begin to understand division as both sharing and grouping using concrete objects, pictorial representations and arrays to solve problems. Pupils should begin to explore finding simple fractions of objects, numbers and quantities and connect fractions to sharing and grouping. Know that fractions are equal parts. Understand doubling and halving as inverse operations. **Vocabulary** Begin to use the vocabulary involved in dividing: share, share equally, one each, two each…, group, groups of, lots of, array, row, column, equal groups of, half, halve, quarter, odd, even **Generalisations** • True or false? I can only halve even numbers. • Grouping and sharing are different types of problems. Some problems need solving by grouping and some by sharing. Encourage pupils to practically work out which they are doing. **Misconceptions** • Pupils confuse the processes of sharing (into a given number of piles) and grouping (counting out groups of a given number). Note that they may also tend to allow one to dominate and therefore not gain much practice with the other.	**Number facts** Experience regular counting on and back from different numbers in 1s and in multiples of 2, 5 and 10. Count a set of objects by grouping in 2s, 5s or 10s Count these pennies (2 at a time) Know corresponding halves of doubles of all numbers to 10: Half of 6 is ☐ Half of 10 is ☐ Begin to recognise odd and even numbers. Use cubes/numicon to make 9 and recognise it is odd (as the cubes cannot be paired) Pupils should begin to recognise the number of groups counted to support understanding of relationship between multiplication and division. 2 + 2 + 2 + 2 + 2 = 10 5 x 2 = 10 5 pairs 5 hops of 2 **Mental methods and jottings** Solve problems involving sharing, grouping and halving; make equal groups **Counting on** There are 10 seeds and some flower pots. Each pot needs 2 seeds in it. How many pots can be planted? **Sharing** Develops importance of one-to-one correspondence. **Grouping** Pupils should apply their counting skills to develop some understanding of grouping.	https://www.ncetm.org.uk/resources/52830 No formal written layout. Pupils record their maths using pictorial representations, arrays, number lines and mathematical statements. **CONCRETE** **Division as sharing** 15 ÷ 5 = 3 15 shared between 5 10 Begin to group in rows and columns to aid counting

	How many groups of 2 are in 6? Jo has 12 Lego wheels. How many cars can she make? **Using doubling and halving** Know corresponding halves of doubles to 10. Half of 10 is 5. A ladybird has 12 spots altogether. How many spots on each side of its body?	

DIVISION: Y2

Understanding the operation and vocabulary	Mental Calculations	Recording

Understanding the operation and vocabulary

Understanding the operation
Continue to understand division as both sharing and grouping using concrete objects, pictorial representations and arrays to solve problems.

Begin to relate division to fractions.

Continue to work on arrays and begin to understand the inverse relationship between x and ÷.
15 ÷ 3 = 5   There are 5 groups of 3.
5 x 3 = 15
15 ÷ 5 = 3   There are 3 groups of 5.
3 x 5 = 15

Show that division of one number by another cannot be done in any order.
15 ÷ 5 = 3   5 ÷ 15 ≠ 3

Write mathematical statements using the division and equals sign.

6 ÷ 2 = ☐	☐ = 6 ÷ 2	6 ÷ ☐ = 3
3 = 6 ÷ ☐	☐ ÷ 2 = 3	3 = ☐ ÷ 2
☐ ÷ ∇ = 3	3 = ☐ ÷ ∇	

Vocabulary
Understand and use the vocabulary related to division:

group in pairs, 3s … 10s etc
equal groups of, divide, ÷, divided by, divided into, remainder, left over, partition.

Generalisations
Noticing how counting in multiples if 2, 5 and 10 relates to the number of groups you have counted (introducing times tables)

An understanding of the more you share between, the less each person will get.

Mental Calculations

Count regularly, on and back, in steps of 2, 3, 5 and 10 from 0.
    0 3 6 9 12 15 18 ……30
    50 45 40 35 30 …….. 0

Recall and use division facts for the 2, 5 and 10 times table:
How many groups of 10 in 30?
Divide 14 by 2.   25 divided by 5.

Recall corresponding halve of doubles of all numbers to 15 and doubles of multiples of 5 to 50.
Half of 14 is ☐   Half of 30 is ☐

Recognize odd and even numbers.
Explain why 15 is an odd number

Mental methods and jottings
Counting on
70 ÷ 7 = 10 (by counting on in tens using fingers to keep track).

With jottings:
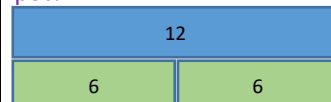24 ÷ 3 = 8 (counting on in threes using a number line to keep track).

Sharing
Share 12 pencils **equally** between 6 pots (using objects/pictures)

12					
2	2	2	2	2	2

Grouping
12 pencils shared between 2 pots, how many in each pot?
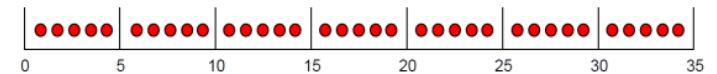
12	
6	6

Recording

No formal written layout. Pupils record their maths using pictorial representations, arrays, number lines and mathematical statements.

CONCRETE

Grouping using a number line
Group from zero in jumps of the divisor to find our 'how many groups of 3 are there in 15?
15 ÷ 3 = 5
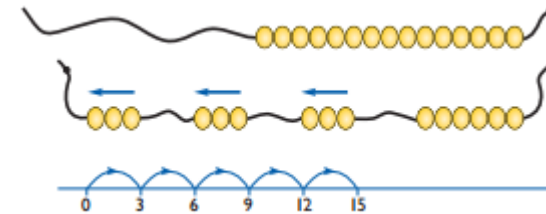
Division using arrays

Link division to multiplication by creating an array and thinking about the number sentences that can be created.

eg   15 ÷ 3 = 5   5 x 3 = 15
        15 ÷ 5 = 3   3 x 5 = 15

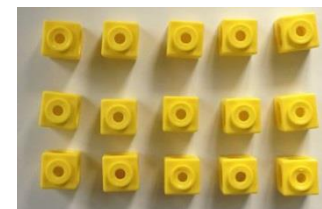Secure understanding of grouping means you count the number of groups you have made. Whereas sharing means you count the number of objects in each group.

Misconceptions

- Pupils may assume that, since multiplication is commutative, division is commutative and can be done in any order. They may write sentences such as 6 ÷ 2 = 12 due to this.
- Pupils may not see how an array can be used to support division, only multiplication.
- When dividing pupils sometimes muddle the divisor and the dividend and so try to divide 'the wrong way round'.

Using doubling and halving

Know corresponding halves of doubles of all numbers to 15 and doubles of all numbers of multiples of 5 to 50.

14 ÷ 2 = 7 (by recalling the doubles first)

With Jottings

24 ÷ 2 (by halving 20, halving 4 and recombining)

20   +   4
↓   ↓
10   +   2 = 13

Using known facts and place value

If 4 ÷ 2 = 2 then 40 ÷ 2 = 20

Fractions

Find a half, a quarter and a third of shapes, objects, numbers and quantities. Finding a fraction of a number of objects to be related to sharing.
Explore visually and understand how some fractions are equivalent – e.g. two quarters is the same as one half.

PICTORIAL

20 ÷ 5 = ?
5 x ? = 20
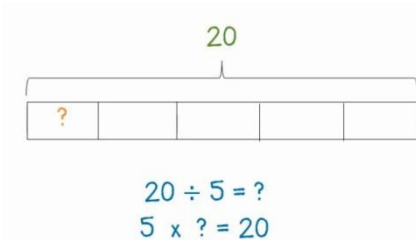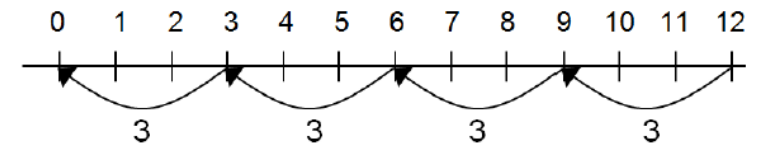
Think of the bar as a whole. Split it into the number of groups you are dividing by and work out how many would be within each group.

ABSTRACT

30 ÷ 5 = 6

DIVISION: Y3

Understanding the operation and vocabulary	Mental Calculations	Recording

Understanding the operation and vocabulary

Understanding the operation
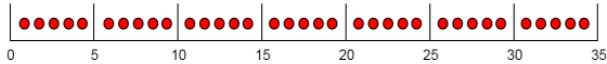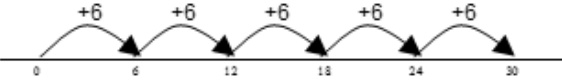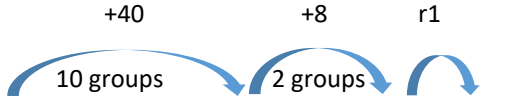
Understand the operation of division as sharing and grouping.

Understand the principles of commutative and associative laws **do not** apply to division.
Recognise that 24÷4 is not equal to 4÷24

Understand the inverse relationship between multiplication and division.
6 x 3 = 18   3 x 6 = 18   18 = 3 x 6   18 = 6 x 3
18 ÷ 3 = 6   18 ÷ 6 = 3   6 = 18 ÷ 3   3 = 18 ÷ 6

Continue using a range of missing number equations as in year 2 but with appropriate numbers.
15 ÷ □ = 5   □ = 14 ÷ 2   20 = □ x □
5 + 10 = 35 ÷ □   7 < □ ÷ 2   □ ÷ □ > 8

Continue to relate fractions to division.
¼ of 16 = 16 ÷ 4

Recognise that tenths arise from dividing an object into 10 equal parts and in dividing quantities by 10
Support with place value slider

Vocabulary

Understand, read and spell vocabulary related to division correctly:
Also see Y1 and Y2

    12   ÷   4   =   3
dividend ÷ divisor = quotient

inverse, in every, quotient

Generalisations

Inverses and related facts – develop fluency in finding related multiplication and division facts.
Develop the knowledge that the inverse relationship can be used as a checking method.

Mental Calculations

Number facts

Count regularly, on and back, in steps of 3, 4 and 8.

Count from 0 in multiples of 4, 8, 50 and 100.
0 8 16 24 32 ….
500 450 400 350 ….

Recall and use division facts for the 3, 4 and 8 times table.
How many threes in 27?   Divide 24 by 4
48 divided by 8   Divide 80 in to fours

Recall corresponding halves and doubles of all numbers to 20, doubles of multiples of 5 to 100 and doubles of multiples of 100 to 500.
Half of 16 is □   18÷2=□   Half of 70 is □

Connect 2,4 and 8 times tables:
100 ÷ 4 = 25 (halve and halve again)
Half of 100 is 50, half of 50 is 25.

Mental methods and jottings

Calculate mathematical statements for division using the multiplication tables that they know, beginning to divide two-digit numbers by one-digit numbers (for known multiplication tables).

Counting on

70 ÷ 5 (by counting on in fives from 50)
With jottings:
52 ÷ 4 (by counting on in fours from 4 x 10 using a number line to keep track).
With remainders: 54 ÷ 4

Partitioning

Without crossing the tens boundary:
69 ÷ 3 = 23
(60 ÷ 3 = 20 ; 9 ÷ 3 = 3)
20 + 3 = 23

Recording

https://www.ncetm.org.uk/resources/52830

Division as Grouping
CONCRETE

How many 6's are in 30?
30 ÷ 6 can be modelled as:

96 ÷ 3 = 32

PICTORIAL

Becoming more efficient using a number line
Pupils need to be able to partition the dividend in different ways.
48 ÷ 4 = 12

        +40   +8

10 groups   2 groups

Remainders
49 ÷ 4 = 12 r1

        +40   +8   r1

10 groups   2 groups

Misconceptions
- Pupils may not see how an array can be used to support division, only multiplication.
- Some pupils may not yet have a strong understanding that multiplication is the inverse of division and so find it hard to move between the two operations.

Partition number in different ways and use jottings:
52 = 50 + 2; 40 + 12; 30 + 12 etc in order to choose appropriate method:
So 42 divided by 3 could be 30 divided by 3 plus 12 divided by 3

Known facts and place value
Use multiplication and division facts they know to make links with other facts.
If: 3 x 2 = 6,   6 ÷ 3 = 2,   2 = 6 ÷ 3
Then: 30 x 2 = 60,   60 ÷ 3 = 20,   2 = 60 ÷ 30

Estimating
Estimate the answer to a calculation:
52 ÷ 4 is between 10 fours and 20 fours.

Use inverse operations and equivalent calculations to check answers:
Check 65 ÷ 5 = 13 with 5 x 13 = 65.

Rounding with remainders
Make sensible decisions about rounding up or down after division in the context of a problem.
Sharing: 49 shared between 4. How many left over?
Grouping: How many 4s make 49. How many are left over?

Place value counters can be used to support pupils apply their knowledge of grouping.
60 ÷ 10 = How many groups of 10 in 60?
600 ÷ 100 = How many groups of 100 in 600?

21		
?	?	?

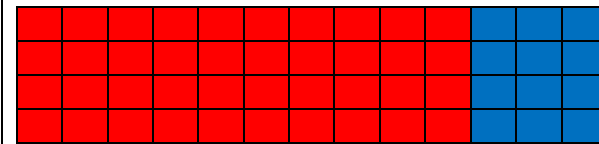**ABSTRACT**
Use times tables knowledge to be able to partition 2 digit numbers and divide each part

52 ÷ 4 =
Recognise that 52 can be split into 40 and 12, then divide each part by 4

10 groups of 4   3 groups of 4 = 13

4	40	12

10   3   = 13
4 | 40   12

This way of recording should only be introduced when pupils have a secure understanding

DIVISION: Y4

Understanding the operation and vocabulary	Mental Calculations	Recording

Understanding the operation and vocabulary

Understanding the operation

Continue to understand the operation of division as sharing and grouping.

Relate division and fractions.
$1/3 = 1 ÷ 3$ $2/3 = 2 ÷ 3$

Understand links to ratio problems (2 quantities in a fixed ratio).

Continue to understand the principles of commutative and associative laws **do not** apply to division.

Understand the distributive law and recognise that
$65 ÷ 5$ is the same as $(50 ÷ 5) + (15 ÷ 5)$

Continue to understand the inverse relationship between multiplication and division.
$6 x 7 = 42$ $7 x 6 = 42$ $42 = 7 x 6$ $42 = 6 x 7$
$42 ÷ 7 = 6$ $42 ÷ 6 = 7$ $7 = 42 ÷ 6$ $6 = 42 ÷ 7$

Continue using a range of equations as in year 3 but with appropriate numbers.
$54 ÷ □ = 6$ $□ = 80 x 8$ $48 = □ x □$
$36 ÷ 4 = 18 ÷ □$ $5 < □ ÷ 9$ $□ ÷ □ > 11$

Understand that hundredths arise when an object is divided by 100 or when tenths are divided by 10. Use place value slider to explore the effect of dividing by 10 and 100

Vocabulary

Understand, read and spell vocabulary related to division correctly:
Also see years 1-3

   12   ÷   4   =   3
dividend ÷ divisor = quotient

Mental Calculations

Number facts

Count on and back in multiples of 6, 7, 9, 25 and 1000.
0 7 14 21 28 …
300 275 250 225 200 …

Learn the multiplication and division facts to 12 x 12 and use place value to derive related facts.
6 x 7 = 42   70 x 6 = 420   How many sixes in 54?
42 ÷ 6 = 7   420 ÷ 6 = 70   Divide 63 by 7
350 divided by 5   108 ÷ 12, what is the quotient?

Recognise and use factor pairs
List the factor pairs of 32

Derive corresponding halves of doubles of multiples of 50 to 1000 and multiples of 1000.
Half of 150 is □   700 ÷ 2 = □   6000 ÷ 2 = □

Mental methods and jottings

Divide mentally using place value, known and derived facts including dividing by 1.

Counting on

126 ÷ 6 (by counting on in sixes from 120).

With Jottings

161 ÷ 7 (by counting on in sevens from 7 x 20 using a number line to keep track)
With remainders: 163 ÷ 7

Partitioning

Without crossing the tens boundary:
78 ÷ 6 = 13 Partition in to multiples of the divisor
60 ÷ 6 = 10 ; 18 ÷ 6 = 3
10 + 3 = 13
Using Numicon, Diennes or place value counters as support.
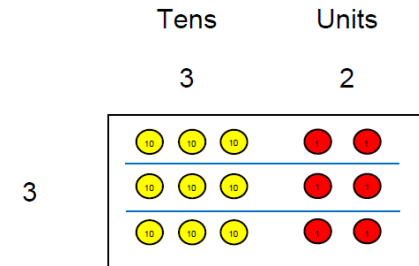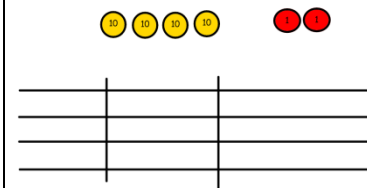
Recording

https://www.ncetm.org.uk/resources/52830

Begin to divide 2-digit and 3-digit numbers by a 1-digit number using a formal written layout, with place value counters to support.

CONCRETE

96 ÷ 3 =
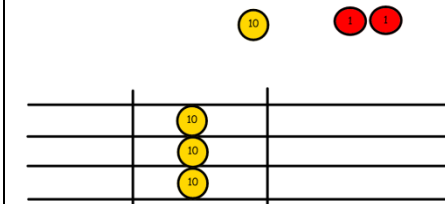

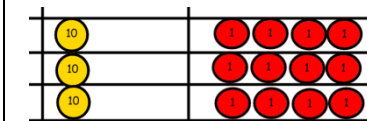Use place value counters to divide using the short division method alongside

Calculations
42 ÷ 3

42 ÷ 3=
Start with the biggest place value, we are sharing 40 into three groups. We can put 1 ten in each group and we have 1 ten left over.

We exchange this ten for ten ones and then share the ones equally among the groups.

We look how much in each group so the answer is 14.

divide, divided by, divisible by, divided into
share between, groups of, factor, factor pair, multiple
times as (big, long, wide …etc), for every, quotient
equals, remainder, quotient, divisor
inverse

Generalisations
True or false? Dividing by 10 is the same as dividing by 2 and then dividing by 5.
Can you find any more rules like this?

Inverses and deriving facts
e.g.: 2 x 3 = 6, so 3 x 2 = 6, 6 ÷ 2 = 3, 60 ÷ 20 = 3,
600 ÷ 3 = 200 etc.

Misconceptions
- Pupils sometimes struggle to partition correctly when dividing up an array or using the grid method.
- Pupils make errors when multiplying (or dividing) by 1 (and 0).
- In division, pupils get confused when there is a remainder within the calculation and may forget to use it or may put the remainder itself as the answer.
- Pupils can sometimes think that dividing by 10 means taking the zero off the end and multiplying by 10 means adding it. This can lead to errors where a decimal point is needed and not used or vice versa.

With jottings
Partitioning crossing the tens boundary.
185 ÷ 5 = 37   *(150 ÷ 5 = 30; 35 ÷ 5 = 7)*
30 + 7 = 37
With remainders: 187 ÷ 5

Continue to partition number in different ways:
762 = 700 + 60 + 2; 600 + 120 + 42

Adjusting
Adjust : 95 ÷ 5
100 ÷ 5 = 20 so 95 ÷ 5 = 19

Doubling and halving
600 ÷ 4 (halve & halve again)
Half of 600 is 300, half of 300 is 150

With jottings
112 ÷ 8 (halve, halve and halve again)
Half of 112 = 56, half of 56 = 28, half of 28 = 14

Factors
500 ÷ 20 (Divide 500 by 10 then divide by 2)

With jottings
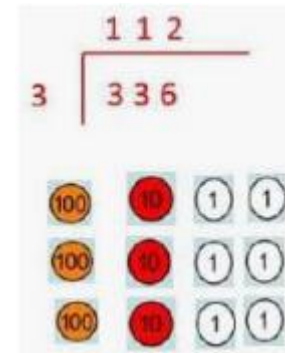90 ÷ 6 (Divide 90 by 3 then divide by 2)

Estimating
Estimate the answer to a calculation:
138 ÷ 3 is between 40 threes and 50 threes.

Use inverse operations and equivalent calculations to check answers:
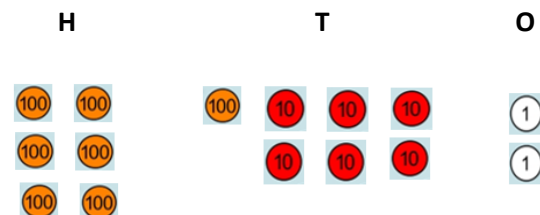Check 98 ÷7 = 14 with 7 x 14 = 98

PICTORIAL

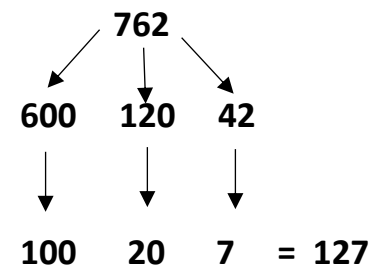Including use of remainders

762 ÷ 6
  H   T   O

Recognise the need to repartition 762 into 600 120 and 42 using times tables facts

$$762$$
$$600\quad 120\quad 42$$
$$100\quad 20\quad 7\quad = 127$$

ABSTRACT

DIVISION: Y5

Understanding the operation and vocabulary	Mental Calculations	Recording
Understanding the operation Continue to understand the distributive law and recognise that 65 ÷ 5 is the same as (50 ÷ 5) + (15 ÷ 5) Continue to relate fractions and division. Understand: • Scaling by simple fractions • Simple rates • Begin to understand links to ratio problems. • Continue using a range of equations as in year 4 but with appropriate numbers. □= 540 ÷ 6 □= 3.2 ÷ 8 48 =□ ÷ □ 90 ÷ 30 = 6 x □ □x□ > 600 ÷ 8 Continue to solve missing number problems □= 540 ÷6 □= 3.2 ÷ 8 48 = □÷□ 90 ÷ 30 = 6 x □ □x□ > 600 ÷ 8 Begin to use brackets. (60 + 3) ÷ 7 = □ □=10 + (1.4 ÷ 2) Understand how multiplication and division are used when converting measures and explore what happens when dividing by 1,000 using place value slider. 2,450 m = 2.45 km **Vocabulary** Understand, read and spell vocabulary related to division correctly. Also see year 4 12 ÷ 4 = 3 dividend ÷ divisor = quotient common factors, prime number, prime factors composite numbers, short division, square number cube number, inverse, power of	**Number facts** Count regularly using a range of multiples, and powers of 10, 100 and 1000, building fluency. Practice and apply the multiplication facts to 12 x 12. Use knowledge of counting in multiples to counting in decimal steps (one decimal place). 0.6 1.2 1.8 2.4 …. Derive corresponding halves of doubles of decimals (to 1 place) using knowledge of place value. Half of 0.4 = 0.2 3.6 ÷ 2 = 1.8 Continue to recall division facts for multiplication tables to 12 x 12 fluently and derive and use related facts: 560 divided by 7 divide 2.1 by 7 4500 ÷ 5, what is the quotient? 3.2 divided by 4 Identify multiples and factors and common factors of two numbers and primes. list the multiples of 9 between 150 and 180 (using tests of divisibility) **Mental methods and jottings** Divide mentally drawing upon known number facts. **Partitioning** Using distributive law: 546 ÷ 6 (540 ÷ 6 = 90; 6 ÷ 6 = 1 so 90 + 1 = 91) With Jottings Begin to divide tenths and 1-digit whole numbers and tenths by 1-digit whole numbers 24.5 ÷ 7 (21 ÷ 7 = 3; 3.5 ÷ 7 = 0.5 so 3 + 0.5 = 3.5) Continue to partition number in different ways: 762 = 700 + 60 + 2; 600 + 120 + 42	https://www.ncetm.org.uk/resources/52830 Divide numbers up to 4 -digits by a 1-digit number using a formal written method (short division) and interpret remainders appropriately for the context Continue to use concrete and pictorial methods from Year 4 until pupils are secure **ABSTRACT** 218 3)654 With one exchange 194 3)582 With two exchanges 145 r1 5)726 With remainders Know how to express a remainder eg 135 ÷ 4 = 33 r 3 or 33 ¾ but £135 ÷ 4 = £33.75

Misconceptions

- Pupils find division by 10, 100, 1000 challenging where there are insufficient zeroes to give a whole number answer – particularly when there are some zeroes
- Exchanging causes an issue for some pupils when using formal division methods – they may forget to carry over any remainder or forget what the remainder actually is.
- Some pupils struggle when the first digit of the dividend is less than the divisor because they don't see how to exchange it all (or carry the whole thing over to the next column). They may carry the divisor over, rather than the first digit of the dividend.
- In division, pupils get confused when there is a remainder within the calculation and may forget to use it or may put the remainder itself as the answer.
- Pupils do not always realise that in some problems, any remainder implies a whole extra unit e.g. how many cars seating 5 people are needed to transport 438 people?
- Sometimes, pupils may struggle when a division problem has a remainder to know how to interpret this or how to represent it.
- Pupils may struggle with the idea that a rate is a division and use of the word per.

Doubling and halving

$14.8 \div 4$ (halve and halve again)
Half of $14.8 = 7.4$; half of $7.4 = 3.7$

With jottings:
$3800 \div 50$ (divide by 100 then double)
$3800 \div 100 = 38$; double $38 = 76$.

Factors

$84 \div 20$ (halve and divide by 10)
$84 \div 2 = 42$ $42 \div 10 = 4.2$

With jottings
$150 \div 6$ ($150 \div 3 = 50$, then $50 \div 2 = 25$).

Using known facts and place value

$8.4 \div 7$ (multiply dividend by 10, then divide quotient by 10)
$84 \div 7 = 12$, $12 \div 10 = 1.2$

Estimating

Use rounding to check answers to calculation and determine, in the context of a problem, levels of accuracy:
$256 \div 12$ is approximately $2560 \div 10$.

Continue to use appropriate strategies to check answers:
Check $860 \div 9$ by using the inverse.

DIVISION: Y6

Understanding the operation and vocabulary	Mental Calculations	Recording

Understanding the operation and vocabulary

Understanding the operation
Continue to relate fractions and division.
Understand:
- Scaling by simple fractions
- Simple rates
- Begin to understand links to ratio problems.

Use their knowledge of order of operations.

Understand that when there are no brackets, do multiplication or division before addition or subtraction.

Understand that if the examples are at the same level of priority then work out the examples from left to right.

Continue using a range of equations as in year 5 but with appropriate numbers.
$\square = 540 \div 0.6$ $\square = 0.48 \div 8$ $4.8 = \square \div \square$
$9 \div 0.3 = 6 \times \square$ $\square \times \square > 0.56 \div 8$

Explore the order of operations using brackets.
compare $14 \div (2 \times 5)$ with $(14 \div 2) \times 5$

Vocabulary
Understand, read and spell vocabulary related to division correctly.
Also see previous years

$12 \quad \div \quad 4 \quad = \quad 3$
dividend $\div$ divisor $=$ quotient

common multiple, common factor, highest common factor, lowest common multiple

Mental Calculations

Number facts
Pupils should count regularly, building on previous work in previous years.

Use knowledge of counting in multiples to counting in decimal steps (two decimal places).
0.09   0.18   0.27   0.36 …

Continue to recall division facts for multiplication tables to 12 x 12 fluently and derive and use related facts:
3000 divided by 60   divide 0.12 by 6
5800 ÷ 6, what is the quotient?
0.64 divided by 8

Derive corresponding halves of decimals (to 2 places) using knowledge of place value.
Half of 0.48 is $\square$ $0.74 \div 2 = \square$

Identify common factors, common multiples and prime numbers.
15 ÷ 6 (divide by 3 then 2)
15 ÷ 3 = 5   5 ÷ 2 = 2.5

Mental methods and jottings
Perform mental calculations, including with mixed operations, large numbers and decimals.

Partitioning
Using distributive law:
18.12 ÷ 3 (18 ÷ 3 = 6; 0.12 ÷ 3 = 0.4 so 6 + 0.4 = 6.4)

With Jottings
2.58 ÷ 6 (2.4 ÷ 6 = 0.4; 0.18 ÷ 6 = 0.03 so 0.4 + 0.03 = 0.43)

Doubling and halving
9.6 ÷ 40 (halve and halve again and divide by 10)

Recording

https://www.ncetm.org.uk/resources/52830

Divide numbers up to 4 digits by a 2-digit whole number using a formal written method (short division and long division).

Divide numbers (up to two decimal places) by 1-digit and 2-digit whole numbers.
Give answers up to 2 decimal places.

Calculate decimal fractions e.g.

CONCRETE/PICTORIAL

ABSTRACT   Use of times tables knowledge – remainders also expressed as fractions or decimal

Generalisations

Order of operations: brackets first, then multiplication and division (left to right) before addition and subtraction (left to right). B O D M A S

Misconceptions

- When dividing, pupils often forget to carry a remainder over as part of the exchange process. This particularly happens at the start of the number where a child may incorrectly 'carry' the divisor across, rather than the first digit of the dividend.
- Pupils have difficulty interpreting remainders resulting from a division as fractions, e.g. if the remainder is 3 from a calculation involving the divisor 5, pupils will write the remainder as 1/3 rather than 3/5
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Half of 9.6 = 4.8; half of 4.8 = 2.4; 2.4 ÷ 10 = 0.24

With jottings:
1700 ÷ 25 (divide by 100 then double and double)
1700 ÷ 100 = 17; double 17 = 34; double 34 is 68

Using known facts and place value
0.99 ÷ 11 (multiply dividend by 100, then divide quotient by 100)
99 ÷ 11 = 9, 9 ÷ 100 = 0.09

Factors
15 ÷ 6 (divide by 3 then 2)
15 ÷ 3 = 5   5 ÷ 2 = 2.5

With jottings
900 ÷ 12   (900 ÷ 3 = 300, then 300 ÷ 2 = 150
then 150 ÷ 2 = 75)

Estimating
Use estimation to check answers to calculation and determine, in the context of a problem, levels of accuracy:
5872 ÷ 54 is approximately 6000 ÷ 50.

Continue to use appropriate strategies to check answers:
Check 4581 ÷ 27 by using the inverse.