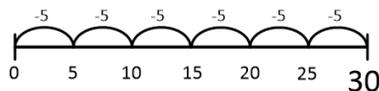


Division			
Year 3	Year 4	Year 5	Year 6
<ul style="list-style-type: none"> recall and use division facts for the 3, 4 and 8 multiplication tables. write and calculate mathematical statements for multiplication and division using the multiplication tables that they know. solve problems, including missing number problems, involving multiplication and division, including positive integer scaling problems and correspondence problems in which n objects are connected to m objects. 	<ul style="list-style-type: none"> recall multiplication and division facts for multiplication tables up to 12×12. use place value, known and derived facts to multiply and divide mentally, including: multiplying by 0 and 1; dividing by 1; multiplying together three numbers. recognise and use factor pairs. 	<ul style="list-style-type: none"> identify multiples and factors, including all factor pairs of a number, and common factors of two numbers. know and use the vocabulary of prime numbers, prime factors and composite (non-prime) numbers. multiply and divide numbers mentally drawing upon known facts. divide numbers up to 4 digits by a one-digit number using the efficient written method of short division and interpret remainders appropriately for the context. multiply and divide whole numbers and those involving decimals by 10, 100 and 1000. solve problems involving addition, subtraction, multiplication and division and a combination of these, including understanding the meaning of the equals sign. solve problems involving multiplication and division, including scaling by simple fractions and problems involving simple rates. 	<ul style="list-style-type: none"> divide numbers up to 4 digits by a two-digit whole number using the formal written method of long division, and interpret remainders as whole number remainders, fractions, or by rounding, as appropriate for the context. use written division methods in cases where the answer has up to two decimal places. perform mental calculations, including with mixed operations and large numbers. use their knowledge of the order of operations to carry out calculations involving the four operations. solve problems involving addition, subtraction, multiplication and division. use estimation to check answers to calculations and determine, in the context of a problem, levels of accuracy.

- Use multiplication facts for 2,3,4,5,8 and 10 times tables to derive related division facts, e.g. $4 \times 8 = 32$, $8 \times 4 = 32$, so $32 \div 8 = 4$ and $32 \div 4 = 8$.
- Use triangular multiplication and division cards for 2x, 3x, 4x, 5x, 8x, and 10x tables.



- Find halves of numbers up to 100.
- Find unit fractions of quantities with denominators of the tables they know. Know that *find a quarter means divide by four*.
- Understand division as grouping and as sharing.
- Practically demonstrate repeated subtraction to find how many groups, e.g. 20 objects grouped in 5s, how many groups?
- Introduce division on a number line as repeated subtraction, e.g. $30 \div 5 = 6$



- Introduce children to written division method (bus stop method) to divide a two-digit number by a one-digit number. E.g. $98 \div 7 = 14$

$$\begin{array}{r} 14 \\ 7 \overline{) 98} \\ \underline{7} \\ 28 \\ \underline{28} \\ 0 \end{array}$$

- Solve simple word problems, e.g. *If there are 14 sweets in a bag, how many people can have 2 each?*
- Divide by 10 and 100 e.g. $230 \div 10 = 23$, $670 \div 100 = 6.7$. Use a place value table to reinforce what is happening to the digits in the number.

- Use multiplication facts for tables up to 12×12 to derive related division facts, e.g. $7 \times 8 = 56$ so $56 \div 8 = 7$ and $560 \div 8 = 70$.
- Sharing and grouping: continue to understand division both as sharing and grouping.
- Find fractions of amounts using times tables knowledge, with a particular focus on tenths and hundredths, e.g. $3/10$ of 20, $1/100$ of 450.
- Approximate answers first. Use informal methods relating to the child's mental methods, e.g. $170 \div 5$ lies between $200 \div 5 = 40$ and $100 \div 5 = 20$
- Continue to practice using short division method (bus stop) to divide a two-digit number by a one-digit number.
- Start to use long division method (chunking) to divide three-digit numbers by one-digit numbers. E.g. $170 \div 5$

$$\begin{array}{r} 34 \\ 5 \overline{) 170} \\ \underline{15} \\ 20 \\ \underline{20} \\ 0 \end{array}$$

$$\begin{array}{r} 20 \times 5 \\ \underline{100} \\ 70 \\ \underline{50} \\ 20 \\ \underline{20} \\ 0 \end{array}$$

- Include calculating with remainders, e.g. $322 \div 5 = 64 \text{ r}2$.

$$\begin{array}{r} 64 \text{ r}2 \\ 5 \overline{) 322} \\ \underline{30} \\ 22 \\ \underline{20} \\ 2 \end{array}$$

- Continue to use times tables knowledge to divide mentally.
- Use short division method (bus stop) to divide four-digit numbers by a one-digit number, including calculations with remainders. E.g. $2576 \div 6 = 429 \text{ r}2$.

$$\begin{array}{r} 429 \text{ r}2 \\ 6 \overline{) 2576} \end{array}$$

- Start to interpret these remainders as decimals.
- Use long division method (chunking) to divide a three-digit number by a two-digit number, including with remainders. $432 \div 15 = 28 \text{ r}12$

$$\begin{array}{r} 28 \text{ r}12 \\ 15 \overline{) 432} \\ \underline{30} \\ 132 \\ \underline{120} \\ 12 \end{array}$$

- Divide whole numbers and decimals by 10, 100 and 1000, e.g. $23 \div 1000 = 0.023$, $18.04 \div 10 = 1.804$.
- Solve multi-step problems involving division, which require an understanding of the equals sign, e.g. $23 \times 4 = \square \div 2$.

- Introduce long division for numbers up to four digits divided by 2 digits. E.g. $4432 \div 15 = 295 \text{ r}7 = 295$ and $7/15$
- Choose an appropriate method of long division depending on the numbers in the question

$$\begin{array}{r} 295 \\ 15 \overline{) 4432} \\ \underline{30} \\ 1432 \\ \underline{1350} \\ 82 \\ \underline{75} \\ 307 \\ \underline{300} \\ 7 \end{array}$$

$432 \div 15$ becomes

$$\begin{array}{r} 28 \text{ r}8 \\ 15 \overline{) 4320} \\ \underline{30} \\ 132 \\ \underline{120} \\ 120 \\ \underline{120} \\ 0 \end{array}$$

Answer: 28.8

- Continue to use short division with integers and interpret the remainders as whole number remainders, fractions, or by rounding, as appropriate for the context.
- Remainders: quotients expressed as fractions or decimal fractions, e.g. $61 \div 4 = 15 \frac{1}{4}$ or 15.25 or rounded depending on the context, e.g. Buses seat 50. There are 220 children. How many buses are needed?
- Extend short division to calculate answers with up to 2 decimal places.

$$\begin{array}{r} 42.25 \\ 4 \overline{) 169.00} \end{array}$$

- Use the order of operations: BIDMAS (Brackets, Indices, Division, Multiplication, Addition, Subtraction) when calculating, e.g. $3 \times (8 + 10) - 15 \div 5 = 51$
- Solve multi-step problems involving division.
- Estimate answers to check accuracy of answers, e.g. $1498 \div 51 \approx 1500 \div 50 = 30$.