|  | Objective | Almost | Meeting | Exceeding |
| :---: | :---: | :---: | :---: | :---: |
| 1 | N1 KPI Count from 0 in multiples of 100 | Pupil can chant the sequence $\text { 100, 200, } 300$ | Pupil can chant the sequence $\text { 200, 400, } 600$ | Pupil can count up to identify numbers that occur in both the sequence of 200 s and the sequence of 300 s. |
| 2 | N2 KPI Find 10 or 100 more than a given number | Pupil can work out ten more than 23. | Pupil can work out ten more than 72 or a 100 more than 204. | Pupil can work out 20 more than 186 or 300 more than 902. |
| 3 | N3 KPI Find 10 or 100 less than a given number | Pupil can work out ten less than 33 | Pupil can work out ten less than 372 or a 100 less than 604. | Pupil can work out 20 less than 186 or 300 less than 902. |
| 4 | N4 KPI Count from 0 in multiples of 4,8 and 50 | Pupil can make some progress with the $4,8,12 \ldots$ sequence | Pupil can chant the sequence $8,16,24 \ldots$ | Pupil can count up to identify numbers that occur in both the sequence of 8 s and the sequence of 50 s . |
| 5 | N5 KPI Recognise the place value of each digit in a three-digit number (hundreds, tens, ones | Pupil can identify the hundreds digit when presented with a three-digit number. | Pupाican arrange tnree ulgt cards, e.g. 3, 4 and 7, to make the largest possible number and can justify their choice of 743 using the language of | pupican solve prodems sucn as 'Arrange the digit cards 4, 5 and 8 to make the number closest to 500' and can justify their choice using the language |

## Number



## Number



| 12 | N12 Understand the structure of situations that require addition or subtraction | The pupil can represent adding two numbers by placing two bars end to end | The pupil can represent adding two numbers by placing two bars end to end and subtracting two numbers by placing the bars side by side. | The pupil can interpret addition as the combining of two sets, and subtraction as removing a part of a set. |
| :---: | :---: | :---: | :---: | :---: |
| 13 | N13 Use commutativity and associativity and multiplication facts to derive related facts | The pupil can work out $2 \times 8 \times$ 5 by changing it to $2 \times 5 \times 8=$ $10 \times 8=80$ with, prompting | The pupil can work out $6 \times 3 \times$ 5 by changing it to $6 \times 5 \times 3=$ $30 \times 3=90$. | The pupil can work out $60 \div 3$ by changing it to $6 \div 3 \times 10=2$ $\mathrm{x} 10=20$. |


| 14 | N14 Understand the structure of <br> situations that require multiplication | The pupil can represent <br> multiplying by placing equal <br> bars side by side, with <br> prompts. | The pupil can represent <br> multiplying by placing equal <br> bars side by side.< | The pupil can represent <br> multiplying by placing equal <br> bars side by side, and as <br> repeated addition. |
| :--- | :--- | :--- | :--- | :--- |
| 15 | N15 KPI Mentally add and subtract <br> numbers including a three-digit number <br> with ones, tens or hundreds | Pupil can calculate 273 ? 2 |  |  |

## Number

N16 Continue to use addition and
16 subtraction facts to 20 and derive related facts up to 100

17 multiplication facts for the 3,4 and 8 multiplication tables, including two-digit numbers times one-digit numbers
-

| Pupil can correctly answer 16 $+2=18$ and deduce that $16+$ $22=38$ | Pupil can deduce that $32+37$ <br> = 69 from $2+7=9$ and $42+$ $37=79$. | Pupil can make up problems such as 'I am thinking of two numbers. Their sum is 87 and their difference is 17 . What are the numbers?' |
| :---: | :---: | :---: |
| Pupil can respond correctly when asked for answers to multiplication questions involving facts from the 3, 4 and 8 multiplication tables and solve word problems such as 'Cupcakes come in boxes of four cakes. How many cupcakes are in six boxes? | Pupil can readily recall the facts from the $2,3,4,5,8$ and 10 multiplication tables and use them within a calculation, such as 'There are eight apples in a bag. How many are in 11 such bags? | Pupil can solve problems such as there are 400 balls in a box. How many balls are there in 8 boxes? |


| 18 | N18 KPI Calculate mentally using division facts for the 3,4 and 8 multiplication tables | Pupil can respond correctly when asked for answers to division questions involving facts from the 3,4 and 8 multiplication | Pupil can solve word problems such as 'There are 96 cupcakes to put into boxes which hold 8 cupcakes each. How many boxes are needed? | Pupil can solve problems such as 'I have a number of cupcakes. I can pack them in boxes which contain four cakes, three cakes or eight cakes. In each case I will fill all of the boxes with none left over. What is the least number of cupcakes I could have?' |
| :---: | :---: | :---: | :---: | :---: |
| 19 | N19 Solve problems including missing number problems, using place value and more complex addition and subtraction | Pupil can solve problems such as 'You have four cards with the digits 1, 2, 3 and 4 on them, one digit per card. Arrange them to make two two-digit numbers so that the sum of them is as large as possible. A clue is that one of the numbers could be 42 | Pupil can solve problems such as 'You have four cards with the digits $2,4,7$ and 8 on them, one digit per card. Arrange them to make two two-digit numbers so that the sum of them is as large as possible' | Pupil can solve problems such as 'You have six cards with the digits $2,3,4,6,7$ and 8 on them, one digit per card. Arrange them to make three two-digit numbers so that the sum of them is as near 100 as possible'. |


| 21 | N21 Solve calculation problems involving multiplication and division, including missing number problems, simple positive integer scaling and simple correspondence problems in which $n$ objects are connected to m objects | Pupil can solve problems such as 'Gita has two pencils. Mary has three times as many pencils as Gita. How many pencils does Mary have?' | as 'Fred has five goldfish and Jake has four times as many. How many goldfish does Jake have?' and 'There are five pupils around one table. Three are girls. One boy and one girl are needed to feed back on a maths problem. How many different pairs of a | Pupil can solve problems such as 'A fish weighs 50 g . Another fish weighs eight times as much. How much does the larger fish weigh?' and 'The school canteen has three choices for the main meal and five choices for pudding. How many different meals can you have?' |
| :---: | :---: | :---: | :---: | :---: |
| 22 | N22 Develop recall of number facts linking addition and multiplication | Pupil can identify doubles and halves by recalling their 2 multiplication table facts and knowledge of even numbers | Pupil can identify sequences such as $3,6,9$ by recalling addition or multiplication facts. | Pupil can identify relationships between numbers by recalling addition and multiplication facts. |

## Number

| 23 | N23 KPI Recall and use multiplication facts for the 3,4 and 8 multiplication tables | Pupil can work out answers to questions such as $3 \times 8=$ ? or $6 \times 8=$ ? . | Pupil can quickly respond to questions such as $4 \times 8=$ ?. | Pupil can solve problems such as 'What number appears in the multiplication table for both 3 and 8 ?' |
| :---: | :---: | :---: | :---: | :---: |

25
N25 Add and subtract numbers with up 25 to three digits, using formal columnar methods of addition and subtraction

N26 KPI Write and calculate mathematical statements for multiplication and division using the

Pupil can, with prompting, add and subtract two threedigit numbers.

Pupil can add and subtract 613 and 285 using a formal method of columnar addition or subtraction.

Pupil can add and subtract 613 and 285 using a formal method of columnar addition or subtraction, explaining how it links with less formal methods.

| Pupil can calculate $3 \times 27$ | Pupil can multiply and divide |
| :--- | :--- | using a formal written method two-digit numbers by a single such as the grid method and $81 \div 3$ using a formal written method such as chunking.

digit, explaining how their
method works and extending it to more digits.

## Number

## 27

N27 Check addition calculations using
27 subtraction and addition and subtraction calculations using rounding

N28 KPI Recognise, find and write
28 fractions of a discrete set of objects, unit fractions with small denominators

| 27 | N27 Check addition calculations using subtraction and addition and subtraction calculations using rounding | Pupil can check the answer to $19+8=27$ by working out 27 ? $8=19$ or by realising that 19 is close to 20 and 8 is close to 10 so the answer should be close to 30 . | Pupil can check the answer to $217+48=265$ by working out 265 ? $48=217$ or by rounding the numbers to $200+50=$ 250 . They can check the answer to 217 ? 48 by rounding to 200 ? $50=150$ | $\left\lvert\, \begin{aligned} & \text { Puplicant cneck che antswer } \\ & 217+48=265 \text { by selecting }\end{aligned}\right.$ from a range of checking strategies for the most appropriate one or by rounding the numbers to $200+$ $50=250$. They can check the answer to 217 ? 48 by rounding to 200 ? $50=150$ and predict whether the estimate |
| :---: | :---: | :---: | :---: | :---: |
| 28 | N28 KPI Recognise, find and write fractions of a discrete set of objects, unit fractions with small denominators | Pupil can arrange a set of 12 counters into six groups of two counters each and select, with prompting, $1 / 6$ of them | Pupil can arrange a set of 24 counters into equal groups and select $1 / 6$ of them, recording their selection using fraction notation. | Pupil can identify what types of fraction can be made with a set of 24 counters, realising that quarters and sixths are possible but fifths are not. |

Number

N29 KPI Recognise, find and write
29 fractions of a discrete set of objects, nonunit fractions with small denominators

N30 KPI Count up and down in tenths; recognise that tenths arise from dividing
an object into 10 equal parts and in dividing one-digit numbers or quantities by 10

Pupil can arrange a set of 12 Pupil can arrange a set of 24 counters into six groups of two counters each and select, with prompting, $3 / 6$ of them.
counters into equal groups and select 4/6 of them, recording their selection using fraction notation.

Pupil can identify what types of fraction can be made with a set of 24 counters. comparing $3 / 4$ and $5 / 6$ using the counters.

Pupil can confidently count back from $31 / 10$ in steps of seven-tenths. The pupil can divide a cake into ten equal pieces and identify three of them as three-tenths. They can also share three cakes between ten people and explain that each person gets three-tenths of a cake.

## Number

| 31 | N31 KPI Recognise and show, using diagrams, equivalent fractions with small denominators | Pupil can draw a 3 by 2 rectangle and demonstrate that $1 / 2$ is equivalent to $3 / 6$ using appropriate shading. | Pupil can draw a 2 by 4 rectangle and demonstrate that $2 / 8$ is equivalent to $1 / 4$ and that $4 / 8$ is equivalent to 1/2. | Pupil can draw a 4 by 3 rectangle and use it to illustrate several families of equivalences, explaining why certain fractions cannot be shown using the rectangle. |
| :---: | :---: | :---: | :---: | :---: |
| 32 | N32 Connect tenths to decimal measures and place value | Pupil can identify the digit after a decimal point as representing tenths | Pupil can explain that tenths are special because our number system is in base 10. They connect this with 0.3 being called three-tenths and the column after the decimal point being called tenths. | Pupil can explain why tenths are special in our number system. They connect this with 0.3 being called three-tenths and the column after the decimal point being called tenths, as well as in contexts such as measures. |

## Number

| 33 | N33 Compare and order unit fractions, and fractions with the same denominators | Pupil can identify the larger of $1 / 3$ and $1 / 5$ and the larger of $2 / 5$ and $3 / 5$, with supporting diagrams | Pupil can identify the larger of $1 / 3$ and $1 / 7$ and identify the smaller out of $2 / 7$ and $5 / 7$. | Pupil can give a general rule for identifying the larger of two unit fractions and the smaller of two fractions with the same denominator, explaining why they work. |
| :---: | :---: | :---: | :---: | :---: |
| 34 | N34 Add and subtract fractions with the same denominator within one whole [for example $5 / 7+1 / 7=6 / 7]$ | Pupil can calculate $1 / 4+1 / 4=$ 2/4. | Pupil can calculate $2 / 9+8 / 9=$ $10 / 9$ and $10 / 9$ ? $8 / 9=2 / 9$. | Pupil can calculate $2 / 9+8 / 9=$ $10 / 9$ and $10 / 9$ ? $8 / 9=2 / 9$. <br> They realise that $10 / 9$ is greater than one and can suggest ways to record this. |


| 35 | N35 KPI Recognise and use fractions as numbers: unit fractions and non-unit fractions with small denominators | Pupil can place $1 / 4,1 / 2$ and $3 / 4$ at appropriate positions on a number line and $1 / 3$, with prompts | Pupil can place $1 / 3$ and $5 / 7$ at appropriate places on a number line. | Pupil can place any fraction in an appropriate position on the number line. |
| :---: | :---: | :---: | :---: | :---: |
| 36 | N36 Solve problems with fractions from the Year 3 curriculum | Pupil can solve problems such as 'I have 12 counters. Onethird of them are yellow. The rest are blue. How many blue counters do I have?' | Pupil can solve problems such as 'I have 12 counters. Onequarter of them are blue, onethird are yellow and the rest are green. How many are green?' | Pupil can devise problems such as 'I have 24 counters. Onethird of them are blue, onesixth are red and one-eighth are green. The rest are yellow. How many are yellow?' |

## Coast Academies Maths Framework Band 3

Number
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