

Coast Academies Maths Framework Band 4

Number

Objective		Almost	Meeting	Exceeding
1	N1 KPI Count in multiples of 1000; count backwards through zero to include negative numbers	Pupil can chant the sequence 1000, 2000, 3000 ... and 3, 2, 1, 0, ?1 ..., with prompting	Pupil can chant the sequence 3000, 6000, 9000, 12,000 ... and 2, 1, 0, ?1, ?2 ...	Pupil can count backwards in thousands from 2500 to include negative numbers.
2	N2 Find 1000 more or less than a given number	Pupil can work out 1000 more than 432	Pupil can work out 1000 more than 3468.	Pupil can reduce any four-digit number to zero by subtracting the appropriate number of thousands, hundreds, tens and ones.
3	N3 KPI Count in multiples of 6 and 7	Pupil can count up in 6s using their knowledge of counting up in 3s and can begin the sequences for 7	Pupil can decide whether a number is a multiple of 6 by counting up in 6s or a multiple of 7.	Pupil can identify multiples of 6 and 7 above 100.
4	N4 KPI Count in multiples of 9 and 25	Pupil can begin to count up in 9s and 25s.	Pupil can decide whether a number is a multiple of 9 by counting up in 9s or a multiple of 25 by counting up in 25s.	Pupil can identify whether numbers are in more than one of the sequences of 6, 7, 9, 25 and others with which they are familiar.
5	N5 Recognise the place value of each digit in a four-digit number (thousands, hundreds, tens, ones)	Pupil can identify the thousands digit when presented with a three-digit number.	Pupil can arrange four digit cards showing 3, 4, 6 and 7 to make the smallest possible number and can justify their choice of 3467 using the	Pupil can solve problems such as 'Arrange the digit cards 1, 4, 5 and 8 to make the number closest to 6000' and can justify their choice using the language of place value

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6	N6 Read Roman numerals to 100 (I to C) and know that over time, the numeral system changed to include the concept of zero and place value	The pupil can convert Roman numerals from I to X to our number system.	The pupil can convert a number expressed in Roman numerals below 100 and explain why they are difficult to calculate with.	The pupil can explain why Roman numerals are not a place value system and how zero makes a place value system work.
8	N8 KPI Order and compare numbers beyond 1000	Pupil can choose the smaller number out of 3000 and 1300.	Pupil can place the correct sign (=, < and >) in statements such as between 3004 and 3040 and between 4500 and 4050 + 450	Pupil can solve problems in the context of measurement such as ordering the lengths of rivers.
9	N9 Solve number and practical problems with number and place value from the Year 4 curriculum, with increasingly large positive numbers	Pupil can solve problems such as 'A number has been rounded to the nearest hundred to get 500. What could that number be?'	Pupil can solve problems such as 'A number has been rounded to the nearest hundred to get 3000. What is the largest whole number it could be?'	Pupil can solve problems such as 'I am a number between 3000 and 4000. I am a multiple of 25 and of 9. When I am rounded to the nearest hundred my digits add to 7. What number am I?'

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10	N10 KPI Round whole numbers to 10,000 to the nearest 10, 100 or 1000	Pupil can round 678 to the nearest ten.	Pupil can round 8076 to the nearest hundred	Pupil can round 8074 to the nearest 50.
11	N11 Use the distributive law to multiply two digit numbers by one digit	Pupil can work out 11×3 by calculating $10 \times 3 = 30$ and $1 \times 3 = 3$ and then adding to get 33.	Pupil can work out 23×4 mentally by calculating $20 \times 4 = 80$ and $3 \times 4 = 12$ and then adding to get 92	Pupil can work out 345×6 mentally by calculating $300 \times 6 = 1800$, $40 \times 6 = 240$ and $5 \times 6 = 30$ to get 2070.

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12	N12 Understand the inverse relationship between addition and subtraction	Pupil can 'undo' adding 7 by subtracting 7.	Pupil can 'undo' adding 23 by subtracting 23 and vice versa.	Pupil can explain using manipulatives that addition and subtraction are inverse operations.
15	N15 Mentally add and subtract pairs of three-digit and four-digit numbers	Pupil can calculate the difference between 850 and 640 mentally.	Pupil can calculate the difference between 1348 and 745 mentally.	Pupil can add a sequence of numbers mentally such as $243 + 179 + 606 + 192$.
16	N16 Use addition and subtraction facts to 100 and derive related facts up to 1000	Pupil can correctly answer $56 + 24 = 80$ and deduce that $80 - 24 = 56$.	Pupil can deduce that $120 + 370 = 490$ and $402 + 307 = 709$ from $2 + 7 = 9$.	Pupil can solve problems such as 'I am thinking of two numbers. Their sum is 387 and their difference is 107. What are the numbers?'

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17	N17 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	Pupil can calculate $40 \div 2 = 20$ using their knowledge that $2 \times 2 = 4$.	Pupil can calculate $400 \div 50 = 8$ using their knowledge of $8 \times 5 = 40$. They know that $5 \times 0 = 0$; $12 \times 1 = 12$; $8 \div 1 = 8$; $2 \times 4 \times 3 = 24$.	Pupil can calculate $60 \times 500 \times 30 \times 1 = 900,000$.
18	N18 KPI Solve calculation problems involving two-step addition and subtraction in context, deciding which operations to use and why	Pupil can solve problems such as 'Sarah buys a pen for 40p and a ruler for 80p. How much change does she get from £2?'	Pupil can solve problems such as 'Sarah buys five pens at 99p each. How much change does she get from £5?'	Pupil can solve problems such as 'Sarah buys five pens at £1.25 each, three pencils at 38p each and a ruler for 85p. How much change does she get from £10?'
19	N19 KPI Solve calculation problems involving two-step addition and subtraction in context, deciding which methods to use and why	Pupil can solve calculation problems such as $154 + 23$ by considering the numbers involved and choosing an appropriate mental or written method, e.g. partitioning 23 and adding 20 to 154 to get 174 then adding 3 to get 177.	Pupil can solve calculation problems such as $283 + 119$ by considering the numbers involved and choosing an appropriate mental or written method, e.g. rounding to $280 + 120$ to give 400 and then adjusting by adding 3 and subtracting 1 to give 402.	Pupil can solve calculation problems such as $786 + 247$ by considering the numbers involved and choosing from a variety of mental or written methods.

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20	N20 Solve problems involving multiplying and adding, including integer scaling and harder correspondence problems such as n objects are connected to m objects	Pupil can solve problems such as 'Eggs are sold in boxes of six. How many eggs are there in nine boxes?'	Pupil can solve problems such as 'A stick is 8 cm long. Another stick is 12 times longer. How long is the second stick?' and 'You have four cards each with a different digit on it. How many different two-digit numbers can you make?'	Pupil can solve problems such as 'Three cakes are shared equally between ten children. How much do they have each?'
21	N21 Recognise and use factor pairs	Pupil can recognise that 2 and 6, and 3 and 4 are both pairs of numbers that multiply to make 12	Pupil can list the factor pairs of numbers such as 24.	Pupil can solve problems such as finding the number with the most factors below 30.
22	N22 KPI Recall multiplication facts for multiplication tables up to 12×12	Pupil can respond to any question on multiplication facts up to 12×12 , when given time to think and with the support of jottings and prompts.	Pupil can respond promptly and correctly to any question on multiplication facts up to 12×12	Pupil can respond promptly and correctly to any question such as 'I am thinking of two numbers. They multiply to give 72 and have a difference of 1. What are they?'

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24	N24 Add and subtract numbers with up to 4 digits using the formal written methods of columnar addition and subtraction where appropriate	Pupil can calculate $6078 + 1934$ and $6078 - 1934$, choosing whether to use a mental method or a more formal written layout with prompting	Pupil can calculate $6078 + 1934$ and $6078 - 1934$, choosing whether to use a mental method or a more formal written layout.	Pupil can calculate $6078 + 1934$ and $6078 - 1934$, choosing between a variety of mental methods or a more formal written layout.
25	N25 Multiply two-digit and three-digit numbers by a one-digit number using formal written layout	Pupil can calculate 6×283 using jottings to support progress towards a formal written layout such as the grid method	Pupil can calculate 6×283 using a formal written layout such as the grid method	Pupil can calculate 6×283 using a formal written layout such as the grid method and relate it to the formal methods of long multiplication.

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26	N26 Divide two-digit and three-digit numbers by a one-digit number using formal written layout	Pupil can calculate $156 \div 6$ using jottings to support progress towards a formal written layout such as chunking	Pupil can calculate $156 \div 6$ using a formal written layout such as chunking	Pupil can calculate $156 \div 6$ using a formal written layout such as chunking and relate it to the formal methods of long division.
27	N27 Check answers to addition and subtraction calculations by estimating and using inverse operations	Pupil can check their answer to $68 + 23$ by rounding 68 to 70 and 23 to 20 and working out $70 + 20 = 90$.	Pupil can check their answer to $478 - 133$ by working out $345 + 133$.	Pupil can check their answer to $478 - 133$ by rounding or inverse operations and explain why they chose that method.

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28	N28 Check answers to multiplication and division calculations using rounding	Pupil can check their answer to 68×3 by rounding 68 to 70 and working out $70 \times 3 = 210$.	Pupil can check their answer to 478×3 by rounding 478 to 500 and working out $500 \times 3 = 1500$.	Pupil can check their answer to 478×3 by rounding 478 to 500 and working out $500 \times 3 = 1500$, knowing this will be an over-estimate.
29	N30 Use factors and multiples to recognise equivalent fractions and simplify where appropriate	Pupil can recall some multiplication table facts to write down some fractions equivalent to $1/3$	Pupil can apply their knowledge of multiplication table facts to write down a set of fractions equivalent to $2/5$.	Pupil can recognise common factors between the numerator and denominator of a fraction and divide to simplify the fraction.
30	N31 KPI Count up and down in hundredths; recognise that hundredths arise when dividing an object by one hundred and dividing tenths by ten	Pupil can continue the sequence $1/100, 2/100, 3/100$ and use a 10 by 10 square to identify one-tenth and one-hundredth and, with supporting diagrams, relate the two so that one-tenth of one-tenth is one-hundredth.	Pupil can continue the sequence $1/100, 7/100, 13/100$ for another five terms and draw a 10 by 10 square to demonstrate that one-hundredth of it is one square and one-tenth of it is ten squares They deduce one-tenth of the ten squares is one-hundredth.	Pupil can continue the sequence $1/100, 7/100, 13/100$ and write the terms as tenths when appropriate and draw a 10 by 10 square to demonstrate that one-hundredth of it is one square and one-tenth of it is ten squares. They deduce one-tenth of the ten squares is one-hundredth and

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<p>N32 Divide a one- or two-digit numbers by 10 and 100, identifying the value of the digits in the answer as ones, tenths and hundredths</p>	<p>Pupil can calculate $4 \div 10 = 0.4$ and, with prompting, identify the 4 in 0.4 as four-tenths.</p>	<p>Pupil can calculate $23 \div 100 = 0.23$, identifying the 2 in 0.23 as two-tenths and the 3 as three-hundredths</p>	<p>Pupil can explain why dividing ones by ten or one hundred results in tenths or hundredths and how this might extend into thousandths.</p>
<p>N33 KPI Recognise and show, using diagrams, families of common equivalent fractions</p>	<p>Pupil can draw a 3 by 4 rectangle and demonstrate that $\frac{1}{2}$ is equivalent to $\frac{2}{4}$ and $\frac{3}{6}$ and $\frac{6}{12}$ by appropriate shading.</p>	<p>Pupil can draw a 3 by 4 rectangle and demonstrate that $\frac{2}{12}$ is equivalent to $\frac{1}{6}$ and that $\frac{3}{12}$ is equivalent to $\frac{1}{4}$.</p>	<p>Pupil can draw a 4 by 6 rectangle and use it to illustrate several families of equivalences, explaining why certain fractions cannot be shown using the rectangle.</p>
<p>N34 Recognise that the denominator of a fraction always tells you the number of equal parts that make one whole</p>	<p>Pupil can identify that there are five-fifths in one whole one using diagrams to support.</p>	<p>Pupil can identify that there are seven-sevenths in one whole.</p>	<p>Pupil can identify that there are five-fifths in one whole one using diagrams to support. Pupil can solve problems such as 'Five cards form one-third of my set. How many are there in the whole set?' by multiplying by three.</p>

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<p>N35 Recognise and write decimal equivalents of any number of tenths or hundredths and $1/4$; $1/2$; $3/4$</p>	<p>Pupil can write $7/10$ as 0.7 and extend this to $7/100$ as 0.07 and write $1/2$ as 0.5 with prompting.</p>	<p>Pupil can write $7/10$ as 0.7 and $7/100$ as 0.07. They recognise that 0.7 is also $70/100$ and write $1/4$ as 0.25, $1/2$ as 0.5 and $3/4$ as 0.75</p>	<p>Pupil can write $7/10$ as 0.7 and $7/100$ as 0.07. They recognise that 0.7 is also $70/100$ and write $1/4$ as 0.25, $1/2$ as 0.5 and $3/4$ as 0.75</p>
<p>N36 Continue to compare and order unit fractions, and fractions with the same denominators</p>	<p>Pupil can identify the larger of $1/3$ and $1/4$ and the larger of $2/7$ and $3/7$, with supporting diagrams.</p>	<p>Pupil can identify the larger of $1/6$ and $1/7$ and identify the smaller out of $2/9$ and $5/9$</p>	<p>Pupil can give a general rule for identifying the smaller of two unit fractions and the larger of two fractions with the same denominator, explaining why they work.</p>
<p>N37 Add and subtract fractions with the same denominator</p>	<p>Pupil can calculate $3/4 + 3/4 = 6/4$, with supporting diagrams.</p>	<p>Pupil can calculate $3/9 + 8/9 = 11/9$ and $11/9 - 8/9 = 3/9$.</p>	<p>Pupil can calculate $3/9 + 8/9 = 11/9$ and $11/9 - 8/9 = 3/9$.</p>

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<p>N38 Understand the relation between non-unit fractions and multiplication and division of quantities</p>	<p>Pupil can interpret $\frac{3}{4}$ as $3 \times \frac{1}{4}$, with the support of diagrams.</p>	<p>Pupil can interpret $\frac{3}{5}$ as $3 \times \frac{1}{5}$ and as $3 \div 5$.</p>	<p>Pupil can interpret $\frac{6}{7}$ as $6 \times \frac{1}{7}$ and $\frac{1}{7}$ of 6 and $6 \div 7$.</p>
<p>N39 KPI Rounds decimals with one decimal place to the nearest whole number</p>	<p>Pupil can round 3.2 to 3 and 3.8 to 4 because those are the whole numbers they are nearest to.</p>	<p>Pupil can round 3.2 to 3 and 3.5 to 4, explaining that rounding 3.5 to 4 is a convention rather than because it is nearer to 4.</p>	<p>Pupil can list the numbers to one decimal place that round to a number such as 4, explaining how they know and why 3.5 is included but 4.5 is not included.</p>
<p>N40 Compares numbers with the same number of decimal places up to two decimal places</p>	<p>Pupil can identify the larger number out of 0.6 and 0.64 with the support of a decimal scale.</p>	<p>Pupil can identify the larger number out of 3.02 and 3.2, explaining their reasoning.</p>	<p>Pupil can write instructions for ascertaining the larger number out of 4.28 and 4.08.</p>

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N42 KPI Solve simple measure and money problems involving fractions and decimals to two decimal places	Pupil can solve problems such as 'I have £12. I spend $\frac{3}{4}$ of it on lunch. Do I have enough left for my bus fare home of £1.80?'	Pupil can solve problems such as 'I have £12. I spend $\frac{2}{5}$ of it on lunch and need to save $\frac{1}{3}$ of it for the bus fare home. Do I have enough to spend £2.40 on an ice cream?'	Pupil can make up problems involving harder fractions and money and group them into easy, medium and hard problems.

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