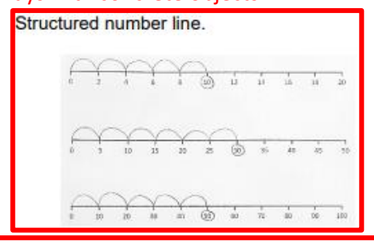
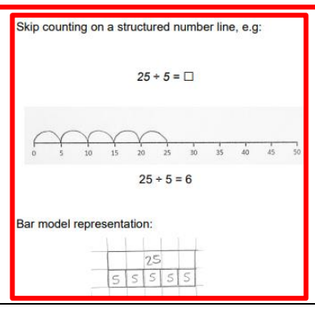
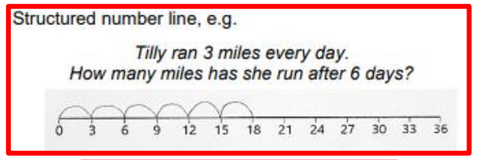
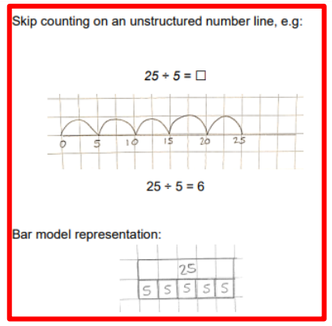
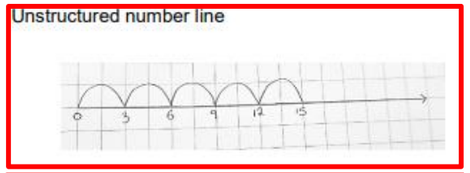
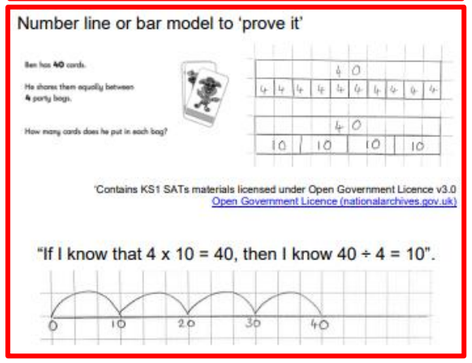
Year 2 Maths Milestone

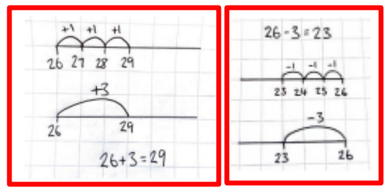
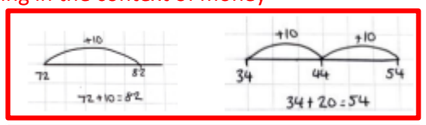
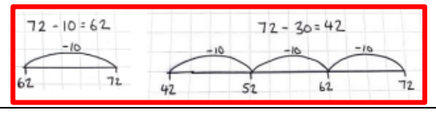
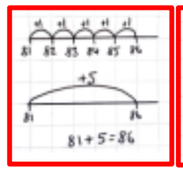
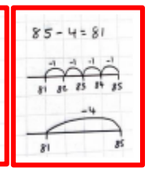
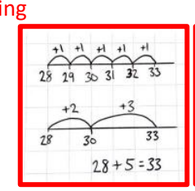
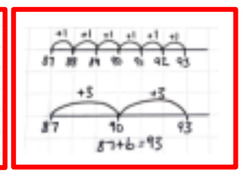
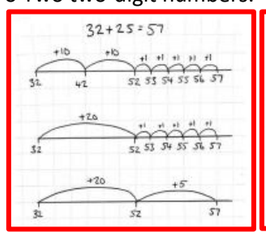
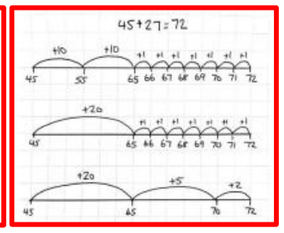
<table>
<tr><th>Milestone 1</th><th>Milestone 2</th><th>Milestone 3</th><th>End of year</th></tr>
<tr><td colspan="4">Number: Place value</td></tr>
<tr><td colspan="4">Key Number Facts:
Know the sequence of counting in multiples of 3.
Count in steps of 10 from any number.</td></tr>
<tr><td>2.1 Count in steps of 10 from any number, forward or backward
2.3 Count in steps of 2, 3 and 5 from 0, and in tens from any given number, forward or backward.
Solve problems involving counting in steps of 10
Count in 2s, 5s and 10s using coins
Count in 2s, 5s and 10s and explore patterns for each
Count in 3s from 0
Create arrays with concrete objects
Structured number line.


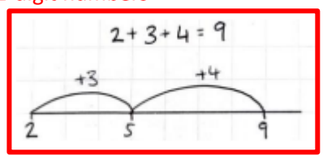
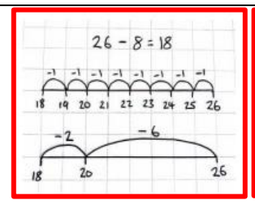
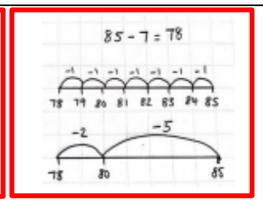
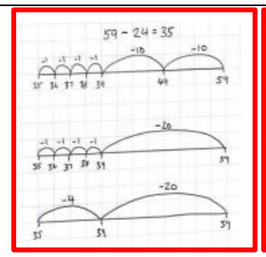
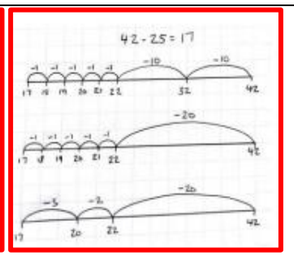
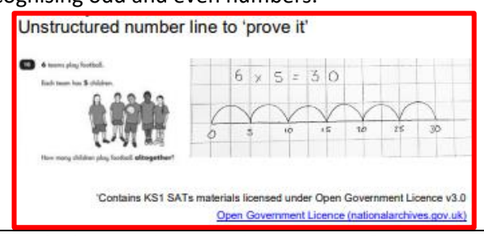
3 6 9 12 15 18 21 24 27 30
Skip counting on a structured number line, e.g:
25 ÷ 5 = □

25 ÷ 5 = 6
Bar model representation:
</td><td>2.4/2.6 Count in steps of 2, 3 and 5 from 0, and in tens from any given number, forward or backward.
Explore patterns when counting forwards and backwards in 10s

Structured number line, e.g.
Tilly ran 3 miles every day.
How many miles has she run after 6 days?
0 3 6 9 12 15 18 21 24 27 30 33 36

Skip counting on an unstructured number line, e.g:
25 ÷ 5 = □

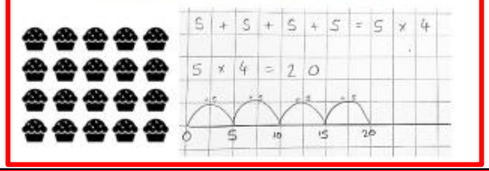
25 ÷ 5 = 6
Bar model representation:
</td><td>2.7 Count in steps of 2, 3 and 5 from 0, and in tens from any given number, forward or backward.
Fill in missing numbers and extend the sequence

Unstructured number line


Number line or bar model to ‘prove it’
Ben has 40 cards.
He shares them equally between 4 party bags.
How many cards does he put in each bag?
4 0
4 4 4 4 4 4 4 4 4 4
4 0
10 10 10 10
‘Contains KS1 SATs materials licensed under Open Government Licence v3.0
Open Government Licence (nationalarchives.gov.uk)
“If I know that 4 x 10 = 40, then I know 40 ÷ 4 = 10”.

0 10 20 30 40</td><td></td></tr>
<tr><td>2.1/2.2 Y1: represent and use number bonds and related subtraction facts within 20
Partition numbers up to 10 in two parts in different ways using concrete objects, recording pictorially
Find all ways to partition any number to 20
2.1 Recognise the place value of each digit in a two-digit number (tens and ones).
Partition any number</td><td colspan="2"></td><td>2.12 Recognise the place value of each digit in a two-digit number (tens and ones).
Partition 2-digit numbers in different ways
Partition numbers in tens and ones in different ways</td></tr>
<tr><td>2.1 Identify, represent, and estimate numbers using different representations, including the number line.</td><td colspan="2"></td><td>2.12 Identify, represent, and estimate numbers using different representations, including the number line.</td></tr>
<tr><td>2.1 Compare and order numbers from 0 up to 100, use < , > and = signs.
Order numbers up to 100 using a number line to support
Reason where numbers have been put on a number line
Find the nearest multiple of 10 on a number line</td><td>2.4 Compare and order numbers from zero up to 100 using >, < and =.</td><td></td><td>2.12 Compare and order numbers from zero up to 100 using >, < and =.
Position numbers on a number line</td></tr>
</table>

Use <, > and = to order and compare sets of numbers			
2.1 Y1: Count to and across 100, forwards and backwards, beginning with 0 or 1, or from any given number. 2.1 Read and write numbers to at least 100 in numerals and in words. Count to and across 100, forwards and backwards	2.4 Read and write numbers to at least 100 in numerals and in words. Write numbers to 20 in words Write multiples of ten in words and combine with numbers 0-9	2.7 Y1: Count to and across 100, forwards and backwards, beginning with 0 or 1, or from any given number. 2.7 Read and write numbers to at least 100 in numerals and in words.	2.12 Read and write numbers to at least 100 in numerals and in words.
2.2 Use place value and number facts to solve problems. Solve problems mentally using known facts			2.12 Use place value and number facts to solve problems.
Number: Addition and subtraction			
Key Number Facts: Know number bonds and related subtraction facts to 20 Derive number bonds to 100 using multiples of 10, relating this to known number bonds to 10 (from Y1) Add and subtract numbers to 100 using informal methods, manipulative resources and visual representations,			
2.2 Solve problems in a practical context involving addition and subtraction of money of the same unit.	2.4 Solve one-step problems that involve addition and subtractions, using concrete objects and pictorial representations.	2.9 Solve problems with addition and subtraction using concrete objects and pictorial representations, including those involving numbers, quantities, and measures. Solve one-step problems Some children to explore two-step problems	2.12 Solve problems with addition and subtraction: o Using concrete objects and pictorial representations, including those involving numbers, quantities, and measures. o Applying their increasing knowledge of mental and written methods. Solve 2-step problems using addition and subtraction
		2.7/2.9 Recall and use addition and subtraction facts to 20 fluently and derive and use related facts up to 100.	2.12 Recall and use addition and subtraction facts to 20 fluently and derive and use related facts up to 100.
2.1 Given a number, identify one/ten more and one/ ten less. Find 1 more/1 less, 2 more/2 less, bridging through tens and through 100	2.4 Given a number, identify one/ten more and one/ ten less.		
2.2 Add and subtract numbers using concrete objects, pictorial representations and mentally, including: o a 2-digit number and ones; o a 2-digit number and tens; o adding three one-digit numbers. Add and subtract a 2-digit number with a 1-digit number with no bridging, including in the context of money  Add and subtract a 2-digit number and a multiple of 10, including in the context of money   	2.4/2.5 Add and subtract numbers using concrete objects, pictorial representations and mentally, including; o A two-digit number and ones o A two-digit number and tens o adding three one-digit numbers. Add and subtract 1 and 10 Add and subtract a 2-digit number and ones **without** bridging   Add and subtract a 2-digit number and ones **with** bridging   	2.7 Add and subtract numbers using concrete objects, pictorial representations and mentally, including: o A two-digit number and tens. 2.9 Add and subtract numbers using concrete objects, pictorial representations and mentally, including: o A two-digit number and ones. o A two-digit number and tens. o Two two-digit numbers.   	2.12 Add and subtract numbers using concrete objects, pictorial representations and mentally, including: o A two-digit number and ones. o A two-digit number and tens. o Two two-digit numbers. o Adding three one-digit numbers.

Add and subtract within 20 using known facts. Add three 1-digit numbers 	  Add three 1-digit numbers Add and subtract a 2-digit number and tens	  o Adding three one-digit numbers. Add multiples of 10 to any number Recap of all of the above, encouraging mental fluency where possible	
	2.5 Show that addition of two numbers can be done in any order (commutative) and subtraction of one number from another number cannot. Show that addition can be done in any order		2.12 Show that addition of two numbers can be done in any order (commutative) and subtraction of one number from another number cannot. Explain commutativity
2.1 Y1: solve one-step problems that involve addition and subtraction, using concrete objects and pictorial representations, and missing number problems such as 7 = □ – 9 Use number bonds to solve missing number problems		2.7 Y1: Solve one-step problems that involve addition and subtraction using concrete objects and pictorial representations and missing number problems such as 7 = □ – 9. Derive and use related facts based on number bond knowledge to 10 and 20 2.7 Recognise and use the inverse relationship between addition and subtraction and use this to check calculations and missing number problems.	2.12 Recognise and use the inverse relationship between addition and subtraction and use this to check calculations and solve missing number problems Recognise the inverse calculation Solve missing number problems
Number: Multiplication and division			
Know the 2x, 5x and 10x times table and the related division facts. Recognise odd and even numbers.			
	2.6 Recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables, including recognising odd and even numbers.	2.8/2.10 Recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables, including recognising odd and even numbers.	2.13 Recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables, including recognising odd and even numbers. 
	2.6 Calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication (x), division (÷) and equals (=) signs.	2.10 Calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication (x), division (÷) and equals (=) signs.	2.13 Calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication (x), division (÷) and equals (=) signs.
		2.10 Show that multiplication of two numbers can be done in any order (commutative) and division of one number by another cannot.	2.13 Show that multiplication of two numbers can be done in any order (commutative) and division of one number by another cannot.
	2.6 Solve problems involving multiplication and division, using materials, arrays, repeated addition, mental methods, and multiplication and division facts, including problems in context. Represent multiplication facts pictorially (array, number line)	2.8/2.10 Solve problems involving multiplication and division, using materials, arrays, repeated addition, mental methods, and multiplication and division facts, including problems in context. Solve multiplication problems in the context of money Solve problems using multiplication and division facts for the 10, 2 and 5 times table	2.13 Solve problems involving multiplication and division, using materials, arrays, repeated addition, mental methods, and multiplication and division facts, including problems in context.

	Solve multiplication problems, including using unknown facts, using pictorial representations Solve multiplication and division problems in context Unstructured number line, e.g *How many muffins are there altogether?*  	Share objects equally by counting how many in each group Solve 2-step problems using multiplication and division facts	
Number: Fractions **Key Number Facts:** $\frac{1}{3}+\frac{1}{3}+\frac{1}{3}$ = 1 whole $\frac{1}{4}+\frac{1}{4}+\frac{1}{4}=\frac{3}{4}$ 1 whole $-\frac{1}{4}=\frac{3}{4}$ $\frac{2}{4}=\frac{1}{2}$ Halve all even numbers to 20			
2.3 Recognise, find, and name a half as one of two equal parts of an object, shape or quantity. Understand the difference between sharing and grouping Solve problems involving groups of 2, 5 and 10 objects using pictorial representations	2.6 Recognise, find, and name a half as one of two equal parts of an object, shape or quantity.	2.10 Recognise, find, and name a half as one of two equal parts of an object, shape or quantity.	
2.3 Recognise, find, name and write fractions for 1/3, 1/4, 2/4 and 3/4 of a length, shape, set of objects or quantity. Recognise and name half as one of two equal parts Find a half and a quarter of 2D shapes Count in steps of a half and a quarter, using representations and a number line	2.6 Recognise, find, name and write fractions for 1/3, 1/4, 2/4 and 3/4 of a length, shape, set of objects or quantity. Recognise a fraction of a shape, including quarters, thirds and three quarters	2.8 Recognise, find, name and write fractions for 1/3, 1/4, 2/4 and 3/4 of a length, shape, set of objects or quantity. Recognise and find fractions of shape (1/2, ¼, 2/4, ¾) Find a fraction of a quantity (1/2 and ¼)	2.13 Recognise, find, name and write fractions for 1/3, 1/4, 2/4 and 3/4 of a length, shape, set of objects or quantity. Count in fractional steps (1/2, ¼, 1/3) and solve problems using this Find a fraction of a quantity (unit and non-unit fractions) Solve problems involving fractions of quantity
	2.6 Recognise the equivalence of 2/4 and 1/2.	2.8 Write simple fractions, e.g. 1/2 of 6=3 and recognise the equivalence of 2/4 and 1/2. Draw bar models to represent fractions Use bar models to represent equivalence	2.13 Write simple fractions, e.g. 1/2 of 6=3 and recognise the equivalence of 2/4 and 1/2.
Measurement **Key Number Facts:** 100p = £1 50p+50p= £1 100 cm = 1metre One hour = 60 minutes $\frac{1}{2}$ an hour = 30 minutes $\frac{1}{4}$ of an hour = 15 minutes $\frac{3}{4}$ of an hour = 45 minutes There are 24 hours in a day Recite the months of the year in the correct order			

2.2 Choose and use appropriate standard units to estimate and measure length/height in any direction (cm) using rulers. Measure in cms	2.5 Choose and use appropriate standard units to estimate and measure mass (kg/g) to the nearest appropriate unit using scales. Estimate mass (equivalent to a kilogram, half a kilogram and 100 grams) Measure mass using scales (kg/g)	2.9 Choose and use appropriate standard units to estimate and measure temperature (oC); capacity (litres/ml) to the nearest appropriate unit, using thermometers and measuring vessels. Estimate and measure in ml Measure temperature using a thermometer	2.14 Choose and use appropriate standard units to estimate and measure length/height in any direction (m/cm); mass (kg/g); temperature (oC); capacity (litres/ml) to the nearest appropriate unit, using rulers, scales, thermometers and measuring vessels. Measure length accurately Measure mass accurately Measure temperature accurately Measure capacity accurately
2.2 Compare and order lengths and record the results using >, < and = Compare lengths using >, < and =	2.5 Compare and order mass and record the results using <, > and = Compare and describe mass	2.9 Compare and order lengths, mass, volume/capacity and record the results using >, < and =.	2.14 Compare and order lengths, mass, volume/capacity and record the results using >, < and =.
2.2 Recognise and use symbols for pounds (£) and pence (p); combine amounts to make a particular value. Recognise the value of coins Add different coins together to work out the total		2.8 Recognise and use symbols for pounds (£) and pence (p); combine amounts to make a particular value.	2.14 Recognise and use symbols for pounds (£) and pence (p); combine amounts to make a particular value.
2.2 Find different combinations of coins that equal the same amounts of money.		2.8 Find different combinations of coins that equal the same amounts of money.	2.14 Find different combinations of coins that equal the same amounts of money.
		2.8 Solve simple problems in a practical context involving addition and subtraction of money of the same unit, including giving change.	2.14 Solve simple problems in a practical context involving addition and subtraction of money of the same unit, including giving change. Solve two-step problems involving money
	2.5 Compare and sequence intervals of time.		2.14 Compare and sequence intervals of time. Compare and order time intervals Order durations of time
	2.5 Tell and write the time to five minutes, including quarter past/to the hour and draw the hands on the clock face to show these times. Show quarter past and quarter to on a clock face		2.14 Tell and write the time to five minutes, including quarter past/to the hour and draw the hands on the clock face to show these times. (analogue clock)
	2.5 Know the number of minutes in an hour and the number of hours in a day. Recall the number of minutes in an hour Recall the number of hours in a day Solve problems involving time (hours and minutes)		2.14 Know the number of minutes in an hour and the number of hours in a day.
Geometry: Properties of shape			
2.3 Identify and describe properties of 2D shapes, including the number of sides and symmetry in a vertical line. Know properties of 2D and 3D shapes Identify lines of symmetry within 2D shapes	2.6 Identify and describe properties of 2D shapes, including the number of sides and symmetry in a vertical line. Including sorting shapes according to their properties		2.15 Identify and describe the properties of 2-D shapes, including the number of sides and symmetry in a vertical line. Describe and sort shapes according to different criteria
	2.6 Identify and describe the properties of a 3-D shape, including the number of edges, vertices and faces. Including sorting shapes according to their properties		2.15 Identify and describe the properties of a 3-D shape, including the number of edges, vertices and faces. Describe and sort shapes according to different criteria
2.3 Identify 2D shapes on the surface of 3D shapes, for example a circle on a cylinder and a triangle on a pyramid.	2.6 Identify 2-D shapes on the surface of 3-D shapes, for example a circle on a cylinder and a triangle on a pyramid. Describe properties of 2D shapes that make up 3D shapes		2.15 Identify 2D shapes on the surface of 3D shapes, for example a circle on a cylinder and a triangle on a pyramid.
	2.6 Compare and sort common 2-D and 3-D shapes and everyday objects.	2.9 Compare and sort common 2-D and 3-D shapes and everyday objects. Compare properties of 2D and 3D shapes	2.15 Compare and sort common 2-D and 3-D shapes and everyday objects.
Geometry: Position and direction			

Order and arrange combinations of mathematical objects in patterns and sequences			
		2.9 Use mathematical vocabulary to describe position, direction, and movement, including movement in a straight line and distinguishing between rotational as a turn and in turns of right angles for quarter, half, and three-quarter turns (clockwise and anti-clockwise). Describe rotational turns (half, quarter and three-quarter) Begin to understand the term right-angle Begin to understand clockwise and anti-clockwise	2.15 Use mathematical vocabulary to describe position, direction, and movement, including movement in a straight line and distinguishing between rotational as a turn and in turns of right angles for quarter, half, and three-quarter turns (clockwise and anti-clockwise). Able to use the full range of positional and directional language
Statistics			
	2.4 Interpret and construct simple pictograms, tally charts, block diagrams and simple tables. Explain information given in a pictogram and tally chart Construct a simple pictogram and tally chart	2.7 Interpret and construct simple pictograms, tally charts, block diagrams and simple tables. Interpret simple tally charts and pictograms	
	2.4 Ask and answer simple questions by counting the number of objects in each category and sort the categories by quantity. (pictogram/tally chart)	2.7 Ask and answer simple questions by counting the number of objects in each category and sort the categories by quantity. (block diagrams)	
		2.7 Ask and answer questions about totalling and comparing categorical data.	