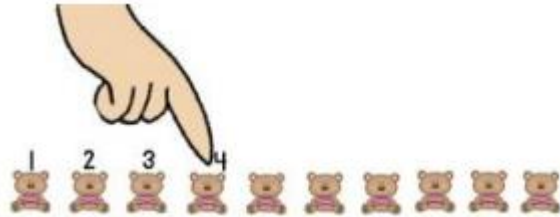


Key Instant Recall Facts – Nursery Year



Take your finger, touch the object and count. Keep your finger on the object until you say the number. Touch and count each object you see.

Number and Place Value

- Recognise and recite number names to 5
- Touch count a group of objects
- Subitise the numbers 1, 2 and 3 (say how many there are without needing to count)

Early Calculation

- Sort objects and say which group is more / less



more gingerbread men



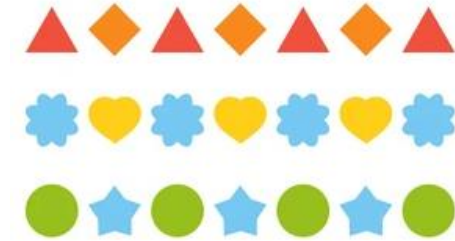
less ladybirds

before
after
next

"We go outside **before** we have lunch."

"We can have a snack **after** we have been to the toilet."

"It is your turn **next**."



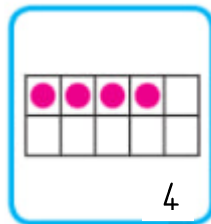
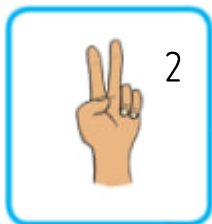
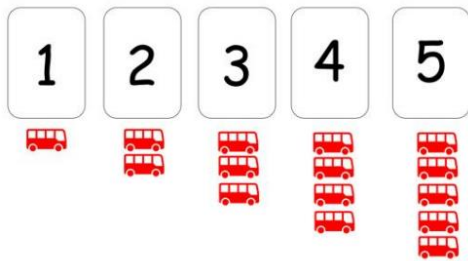
Measure

- Understand and use the language of before, after, next
- Name simple shapes: circle, triangle, square, rectangle
- Recognise and name a range of colours
- Recognise, create and talk about simple patterns

Key Instant Recall Facts – Reception Year

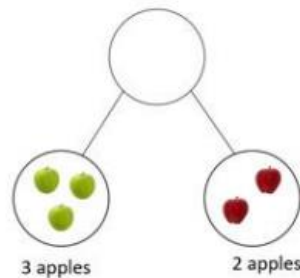
Number and Place Value

- Count in ones from 1 to 20 (by rote)
- Recognise numerals 0 - 9
- Accurately count up to 10 objects
- Place numbers to 10 in order
- Subitise numbers 1 – 6 (say how many there are without needing to count)



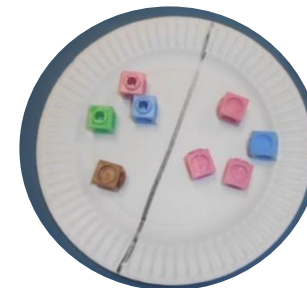
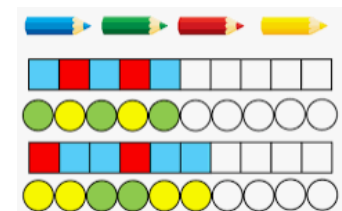
Early Calculation

- Know number bonds to 5
- Use the language of 'more' and 'fewer' to compare two sets of objects.
- Find the total number of items in two groups by counting all of them.
- Say the number that is one more than a given number to 10.
- Say the number that is one less than a given number to 10.
- Double numbers 1-5 (e.g. 1 and 1 makes 2).
- Share objects equally, or fairly, by putting them in equal sized groups



Measure

- Develop an awareness of measure through practical experiences (e.g. length, weight/mass, capacity, distance, height) in readiness for more precise measuring in KS1
- Develop their use and understanding of positional language.
- Name most common 2D shapes (circle, oval, square, rectangle and triangle). and discuss their properties.





Number and Place Value

- Know the sequence of counting in multiples of 2.
- Know the sequence of counting in multiples of 10.
- Know the sequence of counting in multiples of 5.
- Say one more or one less than any number up to 20.



Key Instant Recall Facts –Year 1

Addition and Subtraction

- Know the number bonds and related subtraction facts for all numbers to 5

For example:

$$4 + 0 = 4 \quad 4 - 0 = 4$$

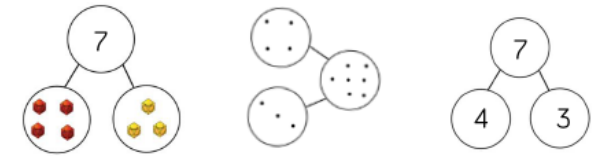
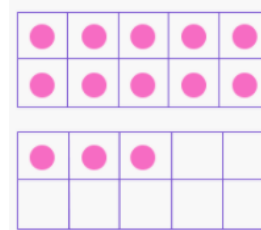
$$3 + 1 = 4 \quad 4 - 1 = 3$$

$$2 + 2 = 4 \quad 4 - 2 = 2$$

$$1 + 3 = 4 \quad 4 - 3 = 1$$

$$0 + 4 = 4 \quad 4 - 4 = 0$$

- Know the number bonds for all numbers to 10 and the related subtraction facts.
- Recognise that 'teens' numbers comprise one ten and some

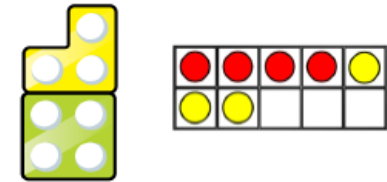


$$7 = 4 + 3$$

$$7 = 3 + 4$$

$$7 - 3 = 4$$

$$7 - 4 = 3$$



Measure

- Say the days of the week and the months of the year in the correct order.
- Recognise the coins and notes of the realm and starting with 1p, 2p, 5p, 10p, 20p.



Key Instant Recall Facts –Year 2

Number and Place Value

- Know the sequence of counting in multiples of 3.
- Count in steps of 10 from any number.

Fractions

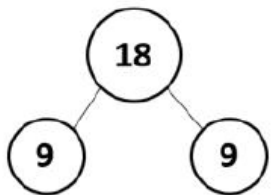
$$\frac{1}{3} + \frac{1}{3} + \frac{1}{3} = 1 \text{ whole}$$

$$\bullet \frac{1}{4} + \frac{1}{4} + \frac{1}{4} = \frac{3}{4}$$

$$\bullet 1 \text{ whole} - \frac{1}{4} = \frac{3}{4}$$

$$\bullet \frac{2}{4} = \frac{1}{2}$$

- Halve all even numbers to 20

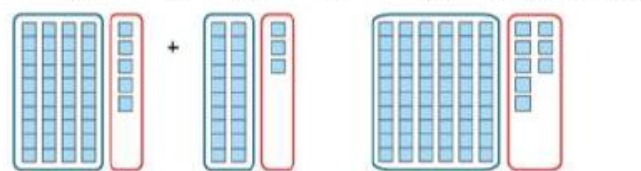


18	
9	9

Half of 18 is 9

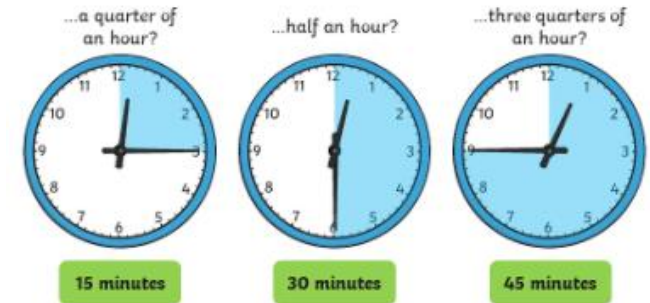
Addition and Subtraction

- 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,

$$45 + 23 = 60 + 8 = 68$$


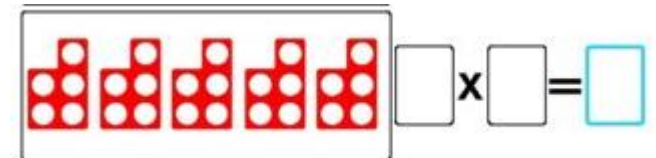
Multiplication and Division

- Know the 2x, 5x and 10x times table and the related division facts.
- Recognise odd and even numbers.



Measure

- 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



Number Facts –Year 3



Number and Place Value

- Know the sequence of counting in 50s
- Know the sequence of counting in 100s

Addition and Subtraction

- Know pairs of numbers which total 100

For example:

$$30 + 70 \quad 55 + 45 \quad 81 + 19$$

- Know pairs of multiples of 100 that total 1000

For example:

$$100 + 900 = 1000$$

$$200 + 800 = 1000$$

Multiplication and Division

- Know the 3x, 4x and 8x table and the related division facts
- Understand that doubling means $\times 2$
- Understand that halving means $\div 2$
- Know that $50 \times 2 = 100$ $25 \times 4 = 100$
 $20 \times 5 = 100$

Fractions

$$\bullet \frac{1}{2} = \frac{2}{4} = \frac{3}{6} = \frac{4}{8} = \frac{5}{10}$$

$$\bullet \frac{1}{4} = \frac{2}{8} = \frac{3}{12} = \frac{4}{16} = \frac{5}{20}$$

$$\bullet \frac{3}{4} = \frac{6}{8} = \frac{9}{12} = \frac{12}{16} = \frac{15}{20}$$

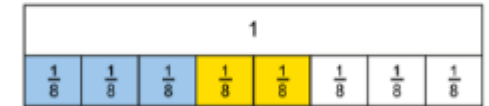
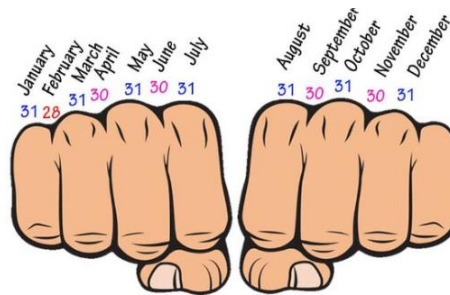
$$\bullet \frac{1}{5} + \frac{1}{5} + \frac{1}{5} + \frac{1}{5} + \frac{1}{5} = \frac{5}{5} = 1 \text{ whole}$$

$$\bullet \frac{1}{9} + \frac{1}{9} + \frac{1}{9} + \frac{1}{9} + \frac{1}{9} + \frac{1}{9} + \frac{1}{9} + \frac{1}{9} + \frac{1}{9} = \frac{9}{9} = 1 \text{ whole}$$

- Understand fraction facts related to whole number facts

$$1 + 5 = 6 \quad \text{linked to} \quad \frac{1}{6} + \frac{5}{6} = \frac{6}{6}$$

$$2 + 8 = 10 \quad \text{linked to} \quad \frac{2}{10} + \frac{8}{10} = \frac{10}{10}$$



$$\frac{3}{8} + \frac{2}{8} = \frac{5}{8}$$

$$\frac{5}{8} - \frac{2}{8} = \frac{3}{8}$$

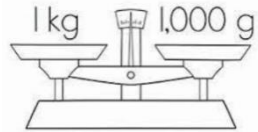
Measure

- 60 seconds = 1 minute
- How many days in each month / year / leap year.
- $50\text{p} \times 2 = \text{£}1.00$ $\text{£}50 \times 2 = \text{£}100$
 $25\text{p} \times 4 = \text{£}1.00$ $\text{£}25 \times 4 = \text{£}100$
 $20\text{p} \times 5 = \text{£}1.00$ $\text{£}20 \times 5 = \text{£}100$
- $1000 \text{ g} = 1\text{kg}$ $1000\text{ml} = 1\text{l}$
 $1000 \text{ m} = 1\text{km}$
- $1000 \div 2 = 500$ $1000 \div 4 = 250$
 $\frac{1}{2} \text{ l/kg/km} = 500$ $\frac{1}{4} \text{ l/kg/km} = 250$

Key Instant Recall Facts –Year 4

Number and Place Value

- Know the sequence of counting in multiples of 25.



Measure

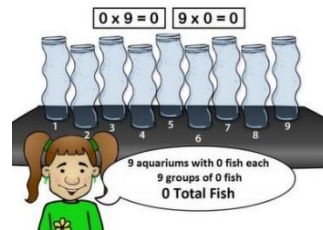
1000m = 1km 100cm = 1m
1000g = 1kg 100p = £1
1000ml = 1l

- 10cm = $\frac{1}{10}$ m 1cm = $\frac{1}{100}$ m
100g = $\frac{1}{10}$ kg
- 1.1kg = 1kg 100g = 1kg + $\frac{1}{10}$ kg
- 48 hours = 2 days
120 minutes = 2 hours
90 minutes = $1\frac{1}{2}$ hours

1 whole									
$\frac{1}{10}$	$\frac{1}{10}$	$\frac{1}{10}$	$\frac{1}{10}$	$\frac{1}{10}$	$\frac{1}{10}$	$\frac{1}{10}$	$\frac{1}{10}$	$\frac{1}{10}$	$\frac{1}{10}$
0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1

Fractions

- 100 ÷ 10 = 10 1000 ÷ 10 = 100
10 ÷ 10 = 1 1 ÷ 10 = $\frac{1}{10}$
- 1 ÷ 10 = $\frac{1}{10}$ = 0.1 10 ÷ 10 = $\frac{10}{10}$ = 1.0
- $\frac{1}{4}$ = 0.25 $\frac{1}{2}$ = 0.5 $\frac{3}{4}$ = 0.75



	Tm Ten Millions 10 000 000	M Millions 1 000 000	Hth Hundreds Thousands 100 000	Tth Ten Thousands 10 000	Tk Thousands 1000	H Hundreds 100	T Tens 10	O One 1	↓ Tenths 0.1 $\frac{1}{10}$
÷10				1	5	4	0	0	
÷100					1	5	4	0	
						1	5	4	

Addition and Subtraction

- Know pairs of multiples of 1,000 which total 10,000

For example:

$$1000 + 9000 = 10,000$$

$$2000 + 8000 = 10,000$$

- Mentally add and subtract numbers with up to 2 digits reliably

Multiplication and Division

- Know the 6x, 7x, 9x, 11x, and 12x tables and the related division facts
- Know that...
Any number x 0 = 0
Any number x 1 = the same number
- Know that a number multiplied by 10 gets 10x bigger and a number divided by 10 gets ten times smaller

For example:

$$5 \times 10 = 50$$

$$50 \div 10 = 5$$

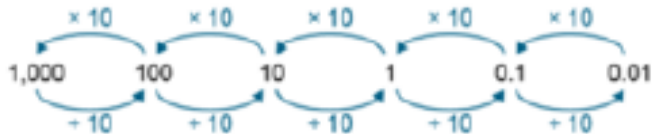
$$0.3 \times 10 = 3$$

$$3 \div 10 = 0.3$$

Key Instant Recall Facts –Year 5

Fractions

- $1 \div 100 = \frac{1}{100} = 0.01$ $2 \div 100 = \frac{2}{100} = 0.02$
 $3 \div 100 = \frac{3}{100} = 0.03$ $4 \div 100 = \frac{4}{100} = 0.04$
 $5 \div 100 = \frac{5}{100} = 0.05$ $6 \div 100 = \frac{6}{100} = 0.06$
 $7 \div 100 = \frac{7}{100} = 0.07$ $8 \div 100 = \frac{8}{100} = 0.08$
 $9 \div 100 = \frac{9}{100} = 0.09$ $10 \div 100 = \frac{10}{100} = \frac{1}{10} = 0.1$
- $10\% = 0.1 = \frac{1}{10} = \frac{10}{100} = \frac{100}{1000}$
 $50\% = 0.5 = \frac{1}{2} = \frac{5}{10} = \frac{50}{100}$
 $25\% = 0.25 = \frac{1}{4} = \frac{25}{100}$
 $75\% = 0.75 = \frac{3}{4} = \frac{75}{100}$
 $20\% = 0.2 = \frac{1}{5} = \frac{2}{10} = \frac{20}{100}$
 $40\% = 0.4 = \frac{2}{5} = \frac{4}{10} = \frac{40}{100}$



Addition and Subtraction

Multiplication and Division

- Derive new facts from known facts:

For example:

$$12 \times 5 = 60 \qquad 60 \div 5 = 12$$

$$1.2 \times 5 = 6.0 \qquad 6 \div 5 = 1.2$$

$$5 \times 7 = 35 \qquad 5 \times 0.7 = 3.5$$

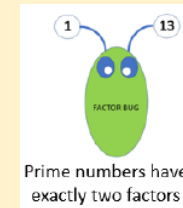
$$5 \times 0.07 = 0.35$$

- Square numbers:

1, 4, 9, 16, 25, 36, 49, 64, 81, 100, 121, 144

- Prime numbers:

2, 3, 5, 7, 11, 13, 17, 19



- Associated facts

$$10,000 = 9500 + 500$$

$$10,000 = 5000 + 5000$$

$$10,000 = 2500 + 2500 + 2500 + 2500$$

$$10,000 \div 2 = 5000$$

$$10,000 \div 4 = 2500$$

$$10,000 \div 5 = 2000$$

$$10,000 \div 10 = 1000$$

$$10,000 \div 100 = 100$$

Measure

- $1 \text{ mm} = \frac{1}{10} \text{ cm}$
- $1 \text{ mm} = \frac{1}{1000} \text{ m}$
- $1 \text{ kg} \approx 2.2 \text{ lbs}$
- $1 \text{ L} \approx 1.76 \text{ pints}$
- $1 \text{ m} \approx 39.4 \text{ inches}$
- $1 \text{ cm} \approx 2.54 \text{ inches}$
- \approx means 'approximately equal to'

Geometry

- $360 \div 4 = 90$ $\frac{1}{4}$ of 360 = 90
- $360 \div 2 = 180$ $\frac{1}{2}$ of 360 = 180
- $\frac{3}{4}$ of 360 = 270
- complements such as
 $70 + 110 = 180$
 $95 + 85 = 180$
- multiples: 90, 180, 270, 360, 450, 540

Key Instant Recall Facts –Year 6

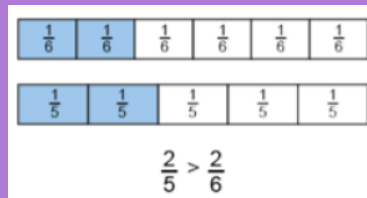


Ratio and Proportion

- Use one % fact to find another
For example:
10% of 300 = 30 so 20% = 30 x 2 = 60
And 5% will be 30 ÷ 2 = 15
- Use common factors to simplify ratios
For example:
24 : 48 simplifies to 1:2

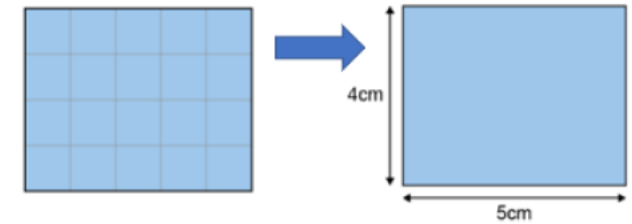
Fractions

- $12.5\% = 0.125 = \frac{1}{8}$ $25\% = 0.25 = \frac{2}{8} = \frac{1}{4}$
- $50\% = 0.5 = \frac{4}{8} = \frac{1}{2}$ $75\% = 0.75 = \frac{6}{8} = \frac{3}{4}$
- $100\% = 1.0 = \frac{8}{8}$
- $0.3 = 0.3333333\dots = 0.33'$ a recurring decimal continually repeats and does not terminate
- $33.3\% = 0.33' = \frac{1}{3}$ $66.6\% = 0.66' = \frac{2}{3}$
- $100\% = 1.0 = \frac{3}{3}$
- Know that when the numerator is the same, the larger the denominator, the smaller the fraction



$$\frac{4}{12} = \frac{1}{3} \qquad \frac{20}{12} = \frac{5}{3} = 1\frac{2}{3}$$

compare and simplify fractions



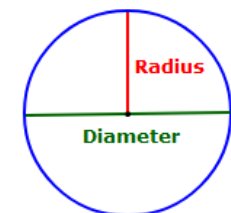
area of a rectangle = length x width
 $4 \times 5 = 5 \times 4 = 20 \text{ cm}^2$

Measure

- $1 \text{ km} \approx \frac{5}{8} \text{ mile}$
- Area of a triangle = $\frac{1}{2}$ x base x height
Area of a rectangle = length x width
Area of a parallelogram = length x perpendicular height
- Volume of a cuboid
= length x width x height
 \approx means 'approximately equal to'

Geometry

- Diameter = 2 x radius
- Radius = $\frac{1}{2}$ x diameter



Circumference

Multiplication and Division

- Fluency with multiplication and division facts up to 12 x 12 and derive others beyond known facts
- Multiply and divide by 10, 100 and 1000

	Tm Ten Millions 10 000 000	M Millions 1 000 000	Hth Hundred Thousands 100 000	Tth Ten Thousands 10 000	Th Thousands 1000	H Hundreds 100	T Tens 10	O Ones 1	t Tenths 0.1 1/10
÷10				1	5	4	0	0	
÷100					1	5	4	0	
÷1000							1	5	.4