Year 1 Number Facts

Number Facts: 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.

Number Facts: Addition and subtraction

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

For example:

4 + 0 = 4	4 – 0 = 4
3 + 1 = 4	4 – 1 = 3
2 + 2 = 4	4 – 2 = 2
1 + 3 = 4	4 – 3 = 1
0 + 4 = 4	4 – 4 = 0

- Know the number bonds for all numbers to 10 and the related subtraction facts.
- Know the number bonds for all numbers to 20 and the related subtraction facts.

For example

10 + 2 = 12	12 – 2 = 10
9 + 3 = 12	12 – 3 = 9
8 + 4 = 12	12 – 4 = 8

- Recognise that 'teens' numbers comprise one ten and some ones.

Number facts: 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.
- Apply number bond knowledge to coins
  10p + 1p = 11p
  10p +2p = 12p

Number Facts: Fractions

Know that……

½ + ½ = 1 whole

¼ + ¼ + ¼ + ¼ = 1 whole

Year 2 Number Facts

Number Facts: Number and place value

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

Number Facts: 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,

Number facts: Multiplication and division

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

Number Facts: 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: Fractions

- $\frac{1}{3}+\frac{1}{3}+\frac{1}{3}$ = 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

Year 3 Number Facts

Number Facts: Number and place value

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

Number Facts: Measure

- 60 seconds = 1 minute
- How many days in each month / year / leap year.
- Find complements to 60.
- 50p x 2 = £1.00 £50 x 2 = £100
  25 p x 4 = £1.00 £25 x 4 = £100
  20p x 5 = £1.00 £20 x 5 = £100
- 1000 g = 1kg 1000ml = 1l
  1000 m = 1km
- 1000 ÷ 2 = 500 1000 ÷ 4 = 250
  $\frac{1}{2}$ l/kg/km = 500
  $\frac{1}{4}$ l/kg/km = 250
  $\frac{3}{4}$ l/kg/km = 750

Number Facts: Fractions

- $\frac{1}{2} = \frac{2}{4} = \frac{3}{6} = \frac{4}{8} = \frac{5}{10}$
- $\frac{1}{5} + \frac{1}{5} + \frac{1}{5} + \frac{1}{5} + \frac{1}{5} = \frac{5}{5}$ = 1 whole
- $\frac{1}{6} + \frac{1}{6} + \frac{1}{6} + \frac{1}{6} + \frac{1}{6} + \frac{1}{6} = \frac{6}{6}$ = 1 whole
- $\frac{1}{7} + \frac{1}{7} + \frac{1}{7} + \frac{1}{7} + \frac{1}{7} + \frac{1}{7} + \frac{1}{7} = \frac{7}{7}$ = 1 whole
- $\frac{1}{8} + \frac{1}{8} + \frac{1}{8} + \frac{1}{8} + \frac{1}{8} + \frac{1}{8} + \frac{1}{8} + \frac{1}{8} = \frac{8}{8}$ = 1 whole
- $\frac{1}{9} + \frac{1}{9} + \frac{1}{9} + \frac{1}{9} + \frac{1}{9} + \frac{1}{9} + \frac{1}{9} + \frac{1}{9} + \frac{1}{9} = \frac{9}{9}$ = 1 whole
- $\frac{1}{10} + \frac{1}{10} + \frac{1}{10} + \frac{1}{10} + \frac{1}{10} + \frac{1}{10} + \frac{1}{10} + \frac{1}{10} + \frac{1}{10} + \frac{1}{10} = \frac{10}{10}$ = 1 whole
- Understand fraction facts related to whole number facts

1 + 5 = 6 (Year1) linked to $\frac{1}{6} + \frac{5}{6} = \frac{6}{6}$ (Year 3)

Number facts: Addition and subtraction

- Know or derive all the complements to 100
  $x + y = 100$; x =? and y = ?
- Know pairs of multiples of 100 that total 1000
  1 + 9 = 10 (Year 1)
  10 + 90 = 100 (Year 2)
  100 + 900 = 1000 (Year 3)
- Add and subtract numbers with up to 3 digits (e.g. 253 + 75 = 328)

Number Facts: Multiplication and division

- Know the 3x, 4x and 8x table and the related division facts
- Understand that doubling means x 2
- Understand that halving means ÷ 2
- Know that…
  50 x 2 = 100 ; 25 x 4 = 100 ; 20 x 5 = 100

Year 4 Number Facts

Number Facts: Number and place value

- Know the sequence of counting in multiples of 25.

Number Facts: Measure

- £5.00 x 2 = £10.00
  £50 x 2 = £100
  £500 x 2 = £1000
  £2.50 x 4 = £10.00
  £25 x 4 = £100
  £250 x 4 = £1000
  £2.00 x 5 = £10.00
  £20 x 5 = £100
  £200 x 5 = £1000
- 10cm = $\frac{1}{10}$ m 1cm = $\frac{1}{100}$ m
- 100g = $\frac{1}{10}$ kg
  1.1 kg = 1kg 100g = 1kg + $\frac{1}{10}$ kg
- 48 hours = 2 days
  120 minutes = 2 hours
  90 minutes = 1 $\frac{1}{2}$ hours

Number Facts: Fractions

- 100 ÷ 10 = 10 1000 ÷ 10 = 100
  10 ÷ 10 = 1 1 ÷ 10 = $\frac{1}{10}$
- 1 ÷ 10 = $\frac{1}{10}$ = 0.1 2 ÷ 10 = $\frac{2}{10}$ = 0.2
  3 ÷ 10 = $\frac{3}{10}$ = 0.3 4 ÷ 10 = $\frac{4}{10}$ = 0.4
  5 ÷ 10 = $\frac{5}{10}$ = 0.5 6 ÷ 10 = $\frac{6}{10}$ = 0.6
  7 ÷ 10 = $\frac{7}{10}$ = 0.7 8 ÷ 10 = $\frac{8}{10}$ = 0.8
  9 ÷ 10 = $\frac{9}{10}$ = 0.9 10 ÷ 10 = $\frac{10}{10}$ = 1.0
- $\frac{1}{4}$ = 0.25 $\frac{1}{2}$ = 0.5
  $\frac{3}{4}$ = 0.75

Number facts: Addition and subtraction

- Know or derive all the complements to 10,000 using multiples of 1000 and related subtraction facts
  $x + y = 10{,}000$; x =? and y = ?

  1 + 9 = 10 (Year 1)
  10 + 90 = 100 (Year 2)
  100 + 900 = 1000 (Year 3)
  1000 + 9000 = 10,000 (Year 4)
- Mentally add and subtract numbers with up to 2 digits reliably

Number Facts: Multiplication and division

- Know the 6x, 7x, 9x, 11x, and 12x tables and the related division facts
- Know that…
  500 x 2 = 1000 1000 ÷ 2 = 500
  250 x 4 = 1000 1000 ÷ 4 = 250
  200 x 5 = 1000 1000 ÷ 5 = 200

Year 5 Number Facts

Number facts: Addition and subtraction; multiplication and division

- Derive new facts from known facts:
  For example:
  12 x 5 = 60 — 60 ÷ 5 = 12
  5.2x 5 = 6.0 — 6 ÷ 5 = 1.2
  5 x 7 = 35 — 5 x 0.7 = 3.5
  5 x 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 ÷ 2 = 5000
  10,000 ÷ 4 = 2500
  10,000 ÷ 5 = 2000
  10,000 ÷ 10 = 1000
  10,000 ÷ 100 = 100

Number Facts: Fractions

- $1 \div 100 = \frac{1}{100} = 0.01$ — $2 \div 100 = \frac{2}{100} = 0.02$
  $3 \div 100 = \frac{3}{100} = 0.03$ — $4 \div 100 = \frac{4}{100} = 0.04$
  $5 \div 100 = \frac{5}{100} = 0.05$ — $6 \div 100 = \frac{6}{100} = 0.06$
  $7 \div 100 = \frac{7}{100} = 0.07$ — $8 \div 100 = \frac{8}{100} = 0.08$
  $9 \div 100 = \frac{9}{100} = 0.09$ — $10 \div 100 = \frac{10}{100} = \frac{1}{10} = 0.1$

- $10\% = 0.1 = \frac{1}{10} = \frac{10}{100} = \frac{100}{1000}$
  $50\% = 0.5 = \frac{1}{2} = \frac{5}{10} = \frac{50}{100}$
  $25\% = 0.25 = \frac{1}{4} = \frac{25}{100}$
  $75\% = 0.75 = \frac{3}{4} = \frac{75}{100}$
  $20\% = 0.2 = \frac{1}{5} = \frac{2}{10} = \frac{20}{100}$
  $40\% = 0.4 = \frac{2}{5} = \frac{4}{10} = \frac{40}{100}$

Number Facts: Measure

- 1mm = $\frac{1}{10}$ cm
- 1mm = $\frac{1}{1000}$ m
- 1 kg ≈ 2.2 lbs
- 1 L ≈ 1.76 pints
- 1m ≈ 39.4 inches
- 1cm ≈ 2.54 inches

≈ means 'approximately equal to'

Number Facts: Geometry

- 360 ÷ 4 = 90 — $\frac{1}{4}$ of 360 = 90
- 360 ÷ 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

Year 6 Number Facts

Number facts: Ratio and proportion

- Derive new % facts from known facts:
  For example:
  1% doubled will give 2% of a quantity
  10% halved will give 5% of a quantity
  100% is the whole amount, so twice as much is the same as 200%

- Fluency with multiplication and division facts up to 12 x 12 and derive others beyond known facts.
- For example:
  24 : 48 simplifies to 1:2 with a common factor of 24
  (24 x 1 and 24 x 2)

Number Facts: Fractions

- 12.5% = 0.125 = $\frac{1}{8}$
  37.5% = 0.375 = $\frac{3}{8}$
  62.5% = 0.625 = $\frac{5}{8}$
  82.5% = 0.825 = $\frac{7}{8}$
  112.5% = 1.125 = $\frac{9}{8}$
  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 = $\frac{8}{8}$
  125% = 1.25 = $\frac{10}{8}$

- 33.$\dot{3}$% = 0.333… = $\frac{1}{3}$
  66.$\dot{6}$% = 0.666… = $\frac{2}{3}$
  100 % = 1.0 = $\frac{3}{3}$
  133.$\dot{3}$% = 1.333… = $\frac{4}{3}$
  266.$\dot{6}$% = 2.666… = $\frac{8}{3}$

0.$\dot{3}$ = 0.3333333…… a recurring decimal continually repeats and does not terminate

Number Facts: Measure

- 1 km ≈ $\frac{5}{8}$ mile
- 1 mile ≈ $\frac{8}{5}$ km (or 1.6 km)
- 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

≈ means 'approximately equal to'

Number Facts: Geometry

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