

Number Knowledge

Stage 0

Read numbers to 5

eg: 0, 1, 2, 3, 4, 5

Count forwards to 5

eg: 0, 1, 2, 3, 4, 5

Count backwards from 5

eg: 5, 4, 3, 2, 1, 0

Say the number after a number (in the range 1-5)

eg: 3, 4, _____

Say the number before in a number (in the range 1-5)

eg: _____ 4, 5,

Order numbers to 5

eg: 5, 3, 1, 2, 4 » 1, 2, 3, 4, 5

Stage 1

Read numbers to 10

eg: 7, 6, 8, 3, 5, 9

Count forwards to 10

eg: 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10

Count backwards from 10

eg: 10, 9, 8, 7, 6, 5, 4, 3, 2, 1, 0

Say the number after a number (in the range 1-10)

eg: 6, 7, 8, _____

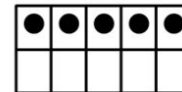
Say the number before in a number (in the range 1-10)

eg: _____ 6, 7, 8

Order numbers to 10

eg: 5, 3, 8, 2, 4, 7 » 2, 3, 4, 5, 7, 8

Instantly recognise patterns to 5



Stage 2/3

Read any number up to 20

eg: 17, 6, 18

Count forwards from any number up to 20

eg: 14, 15, 16, 17, ...

Count backwards from any number within 20

eg: 15, 14, 13, 12, ...

Say the number after a number (in the range 1-20)

eg: 12, 13, _____

Say the number before in a number (in the range 1-20)

eg: _____ 15, 16,

Order numbers to 20

eg: 6, 13, 17, 20, 4 » 2, 6, 13, 17, 20

Know groupings within 5

eg: 3 and 2 , 4 and 1

Know groupings with 5

eg: 5 and 2 , 5 and 4

Read symbols for halves and quarters

eg: $\frac{1}{2}$, $\frac{1}{4}$

Skip count forwards and backwards in 2's to 20

eg: 2, 4, 6, ... and 20, 18, 16, ...

Skip count forwards in 5's to 50

eg: 5, 10, 15, 20, ... 40, 45, 50

Skip count forwards in 10's to 100

eg: 10, 20, 30, 40, ... 70, 80, 90, 100

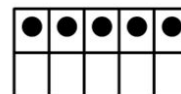
Know groupings within 10

eg: 7 and 3, 6 and 4

Know doubles to 10

eg: $5 + 5 = 10$, $2 + 2 = 4$

Instantly recognise patterns to 10 (double and 5 based)



Stage 4

Read any number up to 100

eg: 17, 26, 38, 79

Count forwards from any number up to 100

eg: 34, 35, 36, 37, ...

Count backwards from any number within 100

eg: 75, 74, 73, 72, ...

Say the number after a number (in the range 1-100)

eg: 54, 55, _____

Say the number before in a number (in the range 1-100)

eg: _____ 75, 76,

Order numbers to 100

eg: 26, 33, 54, 12, 74 » 12, 26, 33, 54, 74

Count forwards and backwards in 2's to 100

eg: 2, 4, ... 98, 100 and 100, 98, ... 4, 2

Count forwards and backwards in 5's to 100

eg: 5, 10, ... 95, 100 and 100, 95, ... 10, 5

Count forwards and backwards in 10's to 100

eg: 10, 20, ... 90, 100 and 100, 90, ... 20, 10

Know numbers in 10's in decades

eg: Six 10's in 60

Know groupings within 20

eg: 17 and 3 4 and 16

Know teen number facts

eg: $10 + 6 = 16$ $11 + ? = 18$

Know multiples of 10 that add to 100

eg: $30 + 70 = 100$

Know doubles to 20

eg: $3 + 3 = 6$ $7 + 7 = 14$ $10 + 10 = 20$

Know halves to 20

eg: $6 - 3 = 3$ $1/2$ of 6

Know addition facts to 10

eg: $4 + 3 = 7$ $6 + 2 = 8$

Read unit fractions

eg: $1/3$ $1/5$ $1/10$

Stage 5

Read any number up to 1000

eg: 333, 479, 983

Count forwards and backwards in 1's from any number in the range 1-1000

eg: 326, 327, 328, 329 ... / 678, 677, 676, 675 ...

Count forwards and backwards in 10's from any number in the range 1-1000

eg: 325, 335, 345, 355 ... / 726, 716, 706, 696 ...

Count forwards and backwards in 100's from any number in the range 1-1000

eg: 321, 421, 521, 621 ... / 863, 763, 663, 563 ...

Order numbers to 1000

eg: 433, 126, 754, 655 » 126, 433, 655, 754

Know number of 10's in a 3-digit number

eg: 326 = 32 tens

Round 3-digit numbers to the nearest 10 or 100

eg: 246 » 250 665 » 700

Know multiples of 100 that add to 1000

eg: 400 and 600 / 200 and 800

Know groupings to 100

eg: 43 and 57 / 62 and 38

Know addition facts to 20

eg: $12 + 8 = 20$

Skip count forwards and backwards in 3's

eg: 3, 6, ... 27, 30 and 30, 27 ... 6, 3

Know multiplication facts for x2

eg: $5 \times 2 = 10$ $6 \times 2 = 12$

Know division facts for x2

eg: $16 \div 2 = 8$ $8 \div 2 = 4$

Know multiplication facts for x5

eg: $6 \times 5 = 30$ $4 \times 5 = 20$

Know division facts for x5

eg: $45 \div 5 = 9$ $30 \div 5 = 6$

Know multiplication facts for x10

eg: $7 \times 10 = 70$ $3 \times 10 = 30$

Know division facts for x10

eg: $80 \div 10 = 8$ $50 \div 10 = 5$

Order fractions with the same denominator

eg: $\frac{2}{4}$ $\frac{3}{4}$ $\frac{1}{4}$ » $\frac{1}{4}$ $\frac{2}{4}$ $\frac{3}{4}$

Stage 6

Read any number up to 1,000,000	eg: 689,675 = six hundred and eighty-nine thousand, six hundred and seventy-five
Order any number up to 1,000,000	eg: 4579, 625478, 326 » 326, 4579, 625478
Read decimals to 3 decimal places	eg: 0.374 = zero point three seven four
Read any fraction (including mixed fractions)	eg: $\frac{8}{6}$ $\frac{4}{5}$ $1\frac{1}{3}$
Order unit fractions	eg: $\frac{1}{10}$ $\frac{1}{5}$ $\frac{1}{2}$ $\frac{1}{4}$ » $\frac{1}{2}$ $\frac{1}{4}$ $\frac{1}{5}$ $\frac{1}{10}$
Say the number 10 more or less in the range 1-1,000,000	eg: 786542, 786552, 786562, ...
Say the number 100 more or less in the range 1-1,000,000	eg: 650278, 650178, 650078, ...
Say the number 1000 more or less in the range 1-1,000,000	eg: 247896, 248896, 249896, ...
Count forwards in halves	eg: 2.5, 3, 3.5, 4, 4.5, 5, ...
Count forwards in quarters	eg: 4.25, 4.5, 4.75, 5, 5.25, ...
Count forwards in fifths	eg: 6.2, 6.4, 6.6, 6.8, 7, 7.2, ...
Count forwards in tenths	eg: 3.1, 3.2, 3.3, 3.4, 3.5, 3.6, ...
Know groupings of 10's and 100's in a 4-digit number	eg: 4626 = 462 tens and 46 hundreds
Know groupings within 1000	eg: 455 and 555 800 and 200
Know groups of 2's in a number to 100 and any remainders	eg: 9 twos in 19 with 1 remainder
Know groups of 3's in a number to 100 and any remainders	eg: 5 threes in 17 with 2 remainders
Know groups of 5's in a number to 100 and any remainders	eg: 6 fives in 33 with 3 remainders
Know groups of 10's in a number to 100 and any remainders	eg: 8 tens in 89 with 9 remainders

Round whole numbers to the nearest 10, 100, 1000

eg: 5508 » 6000

Round decimals to the nearest whole number

eg: 3.47 » 3.00

Know multiplication facts for 3x

eg: $3 \times 4 = 12$

$3 \times 7 = 21$

Know multiplication facts for 4x

eg: $9 \times 4 = 36$

$4 \times 2 = 8$

Know multiplication facts for 6x

eg: $6 \times 5 = 30$

$6 \times 3 = 18$

Know multiplication facts for 7x

eg: $3 \times 7 = 21$

$7 \times 7 = 49$

Know multiplication facts for 8x

eg: $8 \times 3 = 24$

$8 \times 8 = 64$

Know multiplication facts for 9x

eg: $9 \times 5 = 45$

$2 \times 9 = 18$

Recall subtraction facts to 20

eg: $18 - 9 = 9$

$15 - 8 = 7$

Multiply what happens when you multiply by 1, 0 and 10

eg: $14 \times 1 = 14$

$14 \times 0 = 0$

$14 \times 10 = 140$

Stage 7

Stage 7 – Advanced Multiplicative Part-Whole	
Knowledge	Example
Say the number $\frac{1}{1000}$, $\frac{1}{100}$, $\frac{1}{10}$, 1, 10, after any number	1.2, 1.3, ____
Say the number $\frac{1}{1000}$, $\frac{1}{100}$, $\frac{1}{10}$, 1, 10, before any number	____ 6.42, 6.43
Order decimals to 3 decimal places	0.379, 0.48, 0.8
Order mixed fractions with $\frac{1}{2}$, $\frac{1}{4}$, $\frac{1}{3}$, $\frac{1}{5}$, $\frac{1}{10}$	$\frac{2}{10}$, $\frac{3}{4}$, $\frac{1}{2}$, $\frac{5}{3}$
Know equivalent fractions for $\frac{1}{2}$, $\frac{1}{4}$, $\frac{1}{3}$, $\frac{1}{5}$, $\frac{1}{10}$ with denominators 10, 100, 1000	$\frac{1}{4} = \frac{25}{100}$.
Know groupings of 10's, 100's & 1000s in 7 digit numbers	3 456 789 = 345 678 tens
Round whole numbers & decimals to nearest 1 or $\frac{1}{10}$	0.47 → 0.5
Recall all multiplication and division facts to 10 x 10	$8 \times 7 = 56$ $72 \div 9 = 8$
Recall conversions between decimals, fractions & % with $\frac{1}{2}$, $\frac{1}{4}$, $\frac{1}{3}$, $\frac{1}{5}$, $\frac{1}{10}$	$\frac{1}{2}$ 0.5 50%
Use divisibility rules for 2, 3, 5, 9, 10	245 = divisible by 5 as ones is a 5
Know square numbers & square roots to 100	$7^2 = 49$ so $\sqrt{49} = 7$
Identify factors of numbers to 100	Factors of 35 = 1, 5, 7, 35
Find common multiples of numbers to 10	Common multiple of 3 & 7 are 21, 42, 63.....

Stage 8

Stage 8 – Advanced Proportional Part-Whole	
Knowledge	Example
Order fractions, decimals and percentages	$\frac{4}{5}, 0.4, 50\% \rightarrow 0.4, 50\%, \frac{4}{5}$
Know how many tenths, hundredths, and thousandths are in numbers to 3 decimal places	$1.873 \rightarrow 18$ tenths or 187 hundredths, etc.
Know what happens when any number is multiplied or divided by a power of ten	$1.23 \times 100 = 123$ $6.53 \div 10 = 0.653$
Recall fraction, decimal and percentage conversions for commonly used fractions	$\frac{1}{8} = 0.125 = 12.5\%$
Know simple powers of numbers to 10	$2^3 = 8$
Use divisibility rules for 4, 6, 7, 8	36812 is divisible by 4 because 12 is.
Identify common factors of pairs of numbers to 100	Highest common factor of 72 & 81 = 9
Identify lowest common multiple of pairs of numbers to 10	The lowest common multiple of 6 & 8 = 24
Recall prime numbers to 20	1, 2, 3, 5, 7, 11, 13, 17, 19