

Stage 4 – Knowledge

I can read and write numbers up to 100.

I can order numbers up to 100.
E.g. 84, 29, 99, 11.
11, 29, 84, 99

I can count forwards and backwards to 100 from any number.

I can say the number before or after a given number up to 100.

I can skip forwards and backwards in 2's, 5's and 10's up to 100.

I know doubles up to 20 and the matching halves.
e.g. $7 + 7 =$ and $1/2$ of $14 =$

I know 'friends to 10'
e.g. $4 + 6 = 10$
 $10 - 3 = 7$

I know addition and subtraction facts to 10.
E.g. $5 + 3 = 8$ or $9 - 4 = 5$

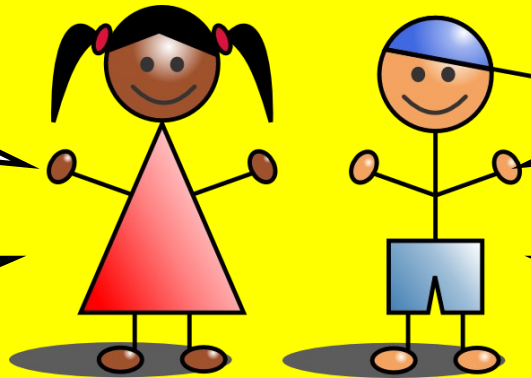
I know symbols and words for $1/2$, $1/4$, $1/3$, $1/5$, $1/6$, $1/8$, $1/10$.

I know groupings within 20.
E.g. $12 + 8 =$

I know the number of 10's in decades.
e.g. 10's in $40 = 4$

I know '10 and facts'
e.g. $10 + 3 = 13$
 $10 + 5 = 15$

I know addition and subtraction of 10's up to 100.
e.g. $30 + 40 =$, $80 - 50 =$



Stage 4 – Strategy

ADDITION

Solve + problems by counting on from the largest number in my head.

SUBTRACTION

Solve - problems by counting back from the largest number in my head.

Solve + and - problems by counting on or back in tens and ones

Hmmm, How do I solve that question?

MULTIPLICATION

Solve X problems by skip counting in 2's, 5's or 10's

FRACTIONS

Find $\frac{1}{2}$ and $\frac{1}{4}$ of sets and shapes by equal sharing.



Stage 5 – Knowledge

I can read and write numbers up to 1000.

I can order numbers up to 1000. E.g. 840, 290, 990, 110.
110, 290, 840, 990.

I can skip forwards and backwards in 2's, 3's, 5's and 10's up to 100.

I can count forwards and backwards by 1's, 10's and 100's up to 1000.

I know all the 2x, 5x, 10x multiplication and division facts.

I can order fractions with the same denominator.
e.g. $\frac{1}{5}$, $\frac{2}{5}$, $\frac{3}{5}$, $\frac{4}{5}$, $\frac{5}{5}$

I know 'friends to 20'
e.g. $14 + 6 = 20$
 $20 - 3 = 17$

I know addition facts to 20 and subtraction facts to 10.
Eg. $15 + 3 = 18$ $9 - 4 = 5$

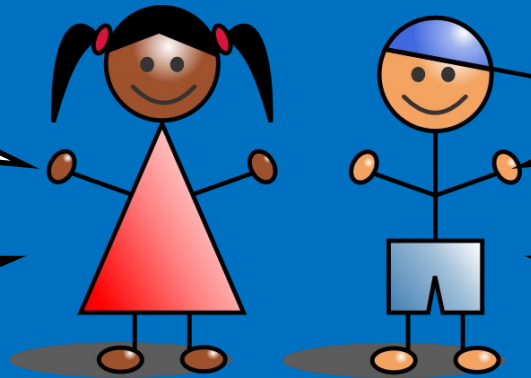
I know symbols and words for $\frac{1}{2}$, $\frac{1}{4}$, $\frac{1}{3}$, $\frac{1}{5}$, $\frac{1}{6}$, $\frac{1}{7}$, $\frac{1}{8}$, $\frac{1}{9}$, $\frac{1}{10}$ and for fractions greater than 1.

I know groupings within 100.
E.g. $20 + 80 =$

I know how many tens and hundreds there are in a three digit number.
e.g. 456 has 45 tens

I know 1, 10, 100 before and after a given number up to 1000

I know multiples of 100's up to 1000.
e.g. $300 + 700 = 1000$



Stage 5 – Strategy

ADDITION & SUBTRACTION

Solve simple problems mentally using basic facts you know:

- ▶ Doubles: $8 + 7 = 8 + 8 - 1$
- ▶ Fives: $8 + 7 = 5 + 3 + 5 + 2$
- ▶ Making Tens: $8 + 7 = 8 + 2 + 5$

ADDITION & SUBTRACTION

Solve 2 & 3 digit problems by:

- ▶ Tidy Numbers:
 $29 + 18$ as $30 + 17$
- ▶ Place Value:
 $33 + 16$ as $30 + 10 + 6$

MULTIPLICATION & DIVISION

Solve problems by:

- ▶ using repeated addition with problems involving 2's, 3's, 4's, 5's and 10's at least
- ▶ or forming the factors when the basic facts are known

FRACTIONS

- ▶ Find a fraction of a number by trial and improvement with addition facts
- ▶ Find fractions of shapes and lengths including fractions greater than 1.
- ▶ Order fractions

Hmmm, How do I solve that question?



Stage 6 – Knowledge

I can count forwards and backwards by 1's, 10's, 100's and 1000's up to 1 000 000.

I know how many groups of 2, 3, 5 and 10 that are in numbers up to 100 and find the remainders.

I can read fractions and improper fractions and order forwards and backwards.

I can read and write and order numbers up to 1 000 000.

I can instantly recall basic addition and subtraction facts to 20

I can record column addition and subtraction with whole numbers up to four digits.

I can round numbers to the nearest 10, 100 or 1000.

I know how many 10's and 100's are in a 4 digit number with remainders.

I know 1, 10, 100, 1000 before and after a given number up to 1 000 000.

I can count forwards and backwards in tenths and hundredths.

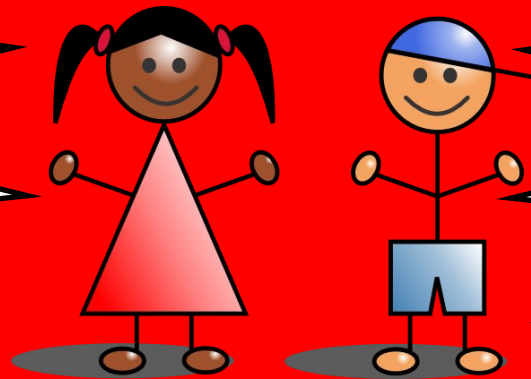
I know how many tenths and hundredths are in decimals to two places and round decimals to the nearest whole number.

I can read decimals to 3 places and order decimals to 2 places.

I can recall all the basic multiplication facts up to 10×10 and some division facts.

I can recall groupings within 1000.
e.g. $240 + 760$

I can multiply by 10, 100, 1000.



Stage 6 – Strategy

ADDITION and SUBTRACTION: using a broad range of mental strategies

Compensation (from Tidy Numbers)	$394 + 79 \rightarrow (394 + 80) - 1$
Place Value Partitioning	$394 + 79 \rightarrow 390 + 70 + 9 + 4$
Compatible Numbers:	$45 + 37 + 65 \rightarrow (45 + 65) + 37$
Reversibility:	$403 - 97 \rightarrow 97 + ? = 403$
Equal Additions: (add to both numbers)	$403 - 97 \rightarrow 406 - 100$
Standard written form for Addition	$\begin{array}{r} 4394 \\ + 579 \\ \hline \end{array}$
Standard Written form for Subtraction	$\begin{array}{r} 2403 \\ - 1097 \\ \hline \end{array}$

FRACTIONS: using Multiplication and Division strategies

Find fractions of whole numbers	$\frac{3}{4}$ of 24 = ? $\frac{3}{4}$ of what is 21?
Solve simple equivalent ratio and rate problems	2 : 3 so ? : 6
Compare fraction sizes with whole numbers	$\frac{37}{7} = 5\frac{2}{7}$

MULTIPLICATION & DIVISION: Deriving multiplication facts

Doubling	$8 \times 3 \rightarrow 2 \times (4 \times 3)$
Adding and Subtracting	$8 \times 3 \rightarrow (7 \times 3) + 3$
Reversing	$63 \div 9 \rightarrow 9 \times ? = 63$
Doubling and halving	$3 \times 12 \rightarrow 6 \times 6$
Rounding/Compensation:	$9 \times 6 \rightarrow (10 \times 6) - 6$
Multiplying by tens and hundreds	$70 \times 5 \rightarrow 7 \times 5 \times 10$

Hmmm, How do I solve that question?

