

Early Level 1: Stage 2—3

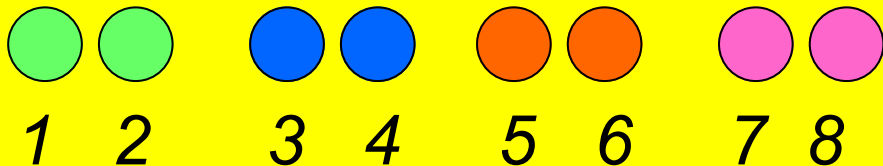
Counting All

Multiplication & Division

I can skip count forwards and backwards to 20 in twos and fives.

I can solve simple multiplication and division problems by counting all the objects.

e.g. 4 groups of 2...



Level 1—Stage 4 Advanced Counting

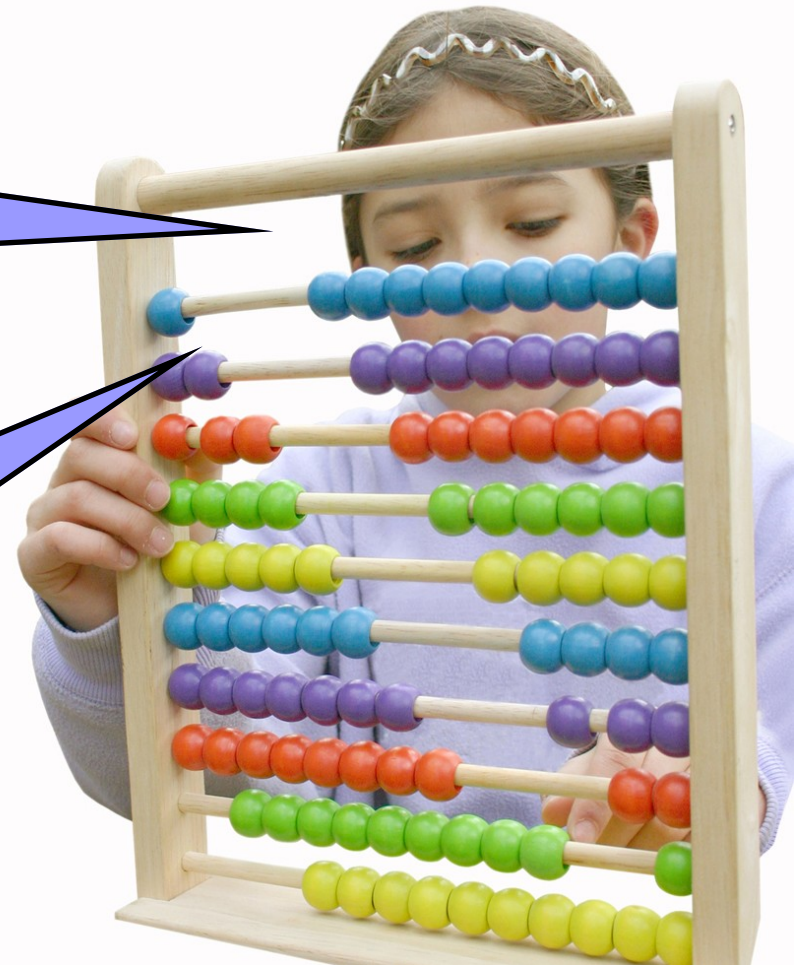
Multiplication & Division

I can skip count forwards and backwards to 100 in twos, fives and tens.

I know doubles and matching halves to 20.

I can solve multiplication problems using skip counting.
e.g. 4×2 as 2, 4, 6, 8

I can solve division problems using: skip counting, fair sharing, using my doubles or halves to 20.



Level 2—Stage 5 Early Additive

Multiplication & Division

I can solve multiplication and division problems using repeated addition or known addition facts.

$$\begin{aligned} \text{eg. } 4 \times 6 &= (6 + 6) + (6 + 6) \\ &= 12 + 12 \\ &= 24 \end{aligned}$$

I can solve multiplication and division problems using known simple multiplication facts or repeated halving.

$$\begin{aligned} \text{eg. } 20 \div 4 &= \square \\ 1/2 \text{ of } 20 &= 10 \text{ and } 1/2 \text{ of } 10 = 5 \\ \text{so } 4 \times 5 &= 20 \end{aligned}$$

I know x2, x5 and x10 multiplication facts and matching division facts.



I can solve multiplication and division problems by using known facts and mental strategies to derive the answers.

Using known facts
 3×6 so $2 \times 6 + 6 = 18$

Doubling
 4×7 as $2 \times 7 = 14$
so $4 \times 7 = 28$

Halving
 $36 \div 4$ as $1/2$ of $36 = 18$
and $1/2$ of $18 = 9$



Place value
 $13 \times 5 = (10 \times 5) + (3 \times 5) = 65$

Rounding and compensating
 $3 \times 18 = 3 \times 20 - 6$

Doubling and halving
 $4 \times 8 = 2 \times 16 = 32$

Reversibility
 $63 \div 9$ as $9 \times \square = 63$

I know multiplication facts to x10 tables and some matching division facts.

I know multiplication facts with tens, hundreds and thousands.

Level 4—Stage 7

Advanced Multiplicative

Multiplication & Division

I can choose appropriately from a range of mental strategies to solve multiplication and division problems.

Possible strategies for 24×6

Place value partitioning
 $(20 \times 6) + (4 \times 6)$

Rounding and compensating
 $25 \times 6 - 6$

Doubling and halving
 $24 \times 6 = 12 \times 12$

Vertical Algorithm
I can explain the place value partitioning involved

Possible strategies for $201 \div 3$
by using reversibility

Place value partitioning
 $(3 \times 60) + (3 \times 7)$ so 67 cans

Rounding and compensating
 $(3 \times 70) - (3 \times 3)$ so 67 cans

Divisibility
33 threes in 100 with 1 left over
so $33 + 33 + 1 = 67$ cans

Vertical Algorithm
I can explain the place value partitioning involved



I know factors of numbers to 100 including prime numbers.

I know square numbers to 100 and the responding square roots.

I know division facts up to $\times 10$ tables.

I know common multiples of numbers to 10.

I know divisibility rules for 2, 3, 5, 9, 10

Level 5—Stage 8

Advanced Proportional

Multiplication & Division

I can choose appropriately from a range of mental strategies to solve problems that involve multiplication of fractions and decimals.

I can choose appropriately from a range of mental strategies to solve division problems with decimals.

For example;

$$3.6 \times 0.75 = \frac{3}{4} \times 3.6 = 2.7$$

(Conversion and commutativity)

For example;

$$7.2 \div 0.4 \text{ as } 7.2 \div 0.8 = 9,$$

so $7.2 \div 0.4 = 18$
(Doubling and halving with place value)

I know simple powers of numbers to 10.

I know fractions—decimal—percentage conversions for given fractions and decimals.

I know common factors of numbers to 100, including the highest common factor.

I know divisibility rules for 2, 3, 4, 5, 6, 8, and 10.

I know least common multiples of numbers to 10.

