

Maths Methods and Representations - Multiplication



Strategies	Concrete	Pictorial	Abstract
Doubling-	Understanding that double means '2 lots of' or '2 groups of' the SAME number	Double 5 is 10	Double 5 is
Pupils should be given opportunities to develop fluent mental recall of doubles and in KS1 relate this to the 2 x table.	groups of the SAME number	Double 5 = 10 Double 6 is	$5 + 5 =$ Doubling 2-digit numbers by partitioning first $ \begin{array}{c c} 1 & 2 \\ 10 & 2 \\ 20 & 4 \end{array} $ $ 20 + 4 = 24$
Counting in multiples of 2,3,		Use a number line or pictorial representations to support counting in multiples of 2,3,5,10	Complete the number sequences (going forwards and backwards):
5,10 Children skip count, gaining			5, 10,,, 25,, 35, 40, ,, 6, 8,, 12,
an idea of the concept of 'groups of.'	골을 골을 줄을	+2 +2 +2 +2	90, 80,, 60,, 40, 30
	3 groups of 2 is 6	4 groups of 2 is 8	If you count in steps of 5, will you say the number 43? How do you know? Prove it



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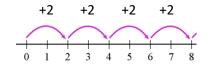
Repeated addition



$$2 + 2 + 2 = 6$$



Opportunities for children to begin to recognise the relationship between repeated addition and multiplication



$$2 + 2 + 2 + 2 = 8$$

4 groups of $2 = 8$
 $4 \times 2 = 8$

There are 3 children. Miss Greenway gives each child 5 golden stars. How many golden stars does Miss Greenway give out altogether?





$$5 + 5 + 5 = 15$$

 $3 \times 5 = 15$

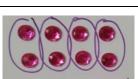
Write addition or multiplication sentences to describe objects and pictures.



$$2 + 2 + 2 + 2 + 2 = 10$$

 $5 \times 2 = 10$

ArraysShowing
commutative
multiplication
(multiplication is
commutative, the
order of the
multiplication
does not affect
the answer.)



$$4 \times 2 = 8$$

 $2 \times 4 = 8$



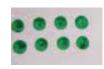
$$4 \times 5 = 20$$

 $5 \times 4 = 20$

Draw/ paint arrays in different rotations to find commutative multiplication sentences.



$$2 \times 4 = 8$$



$$4 \times 2 = 8$$

One bag has 5 apples in it.

I have 4 bags, how many apples are there altogether?

$$5 + 5 + 5 + 5 = 20$$

 $4 \times 5 = 20$

There are 6 bicycles. How many wheels are there altogether?

$$2 + 2 + 2 + 2 + 2 + 2 = 12$$

 $6 \times 2 = 12$