

Multiplication

Following these steps supports children to memorise multiples. Remember children cannot run before they can walk.

1. Counting in steps

Chanting multiples 2,4,6,8,10

2. Using objects as 'lots'

Using objects which are real, socks, helps children to understand multiplication is around us in our environment.



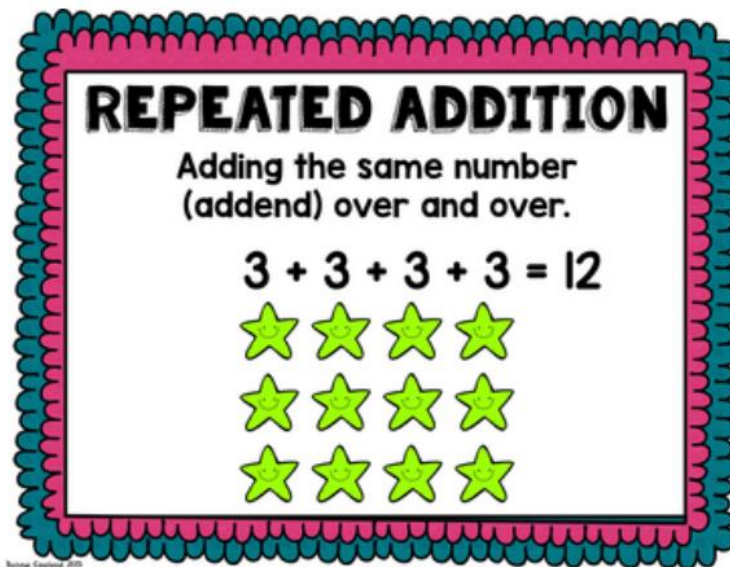
3. Repeated Addition

Multiplication should first be described as addition - an operation children are very familiar with.

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

$$4 \times 5 = 20$$

Children need to physically practise this skill. Repeated addition is what children visualise when they multiply formally.



4. Multiplication is commutative

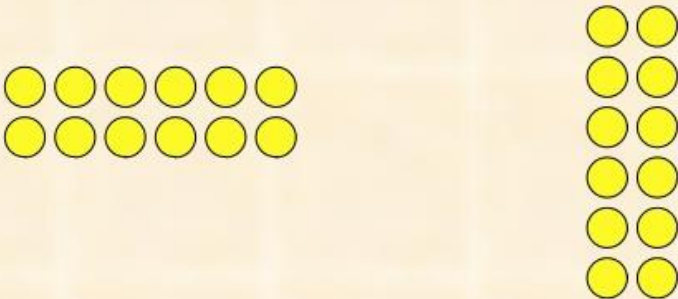
4×5 is the same as 5×4

Children need to use manipulatives to notice these patterns.

Encourage children to use this to multiply by the table they are more secure in. (5×9 should be switched to 9×5).

It doesn't matter whether you do the sum as

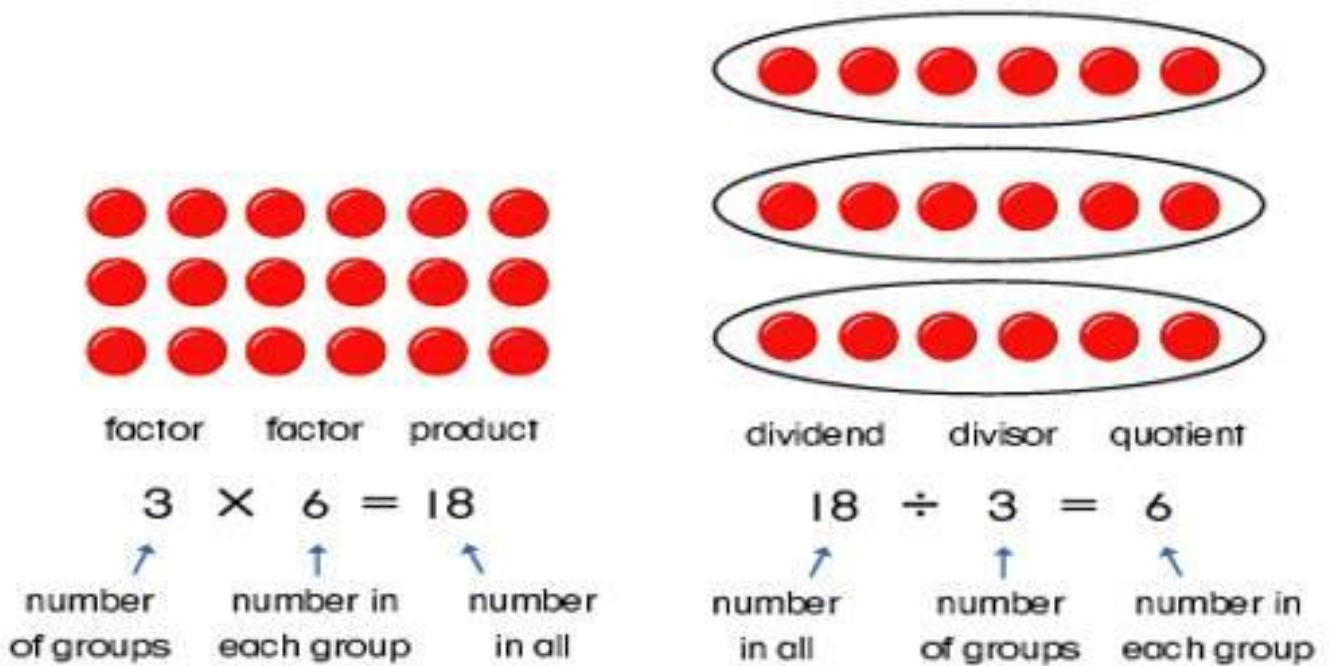
6×2 OR 2×6



You get the same answer

5. Multiplication is the inverse of division.

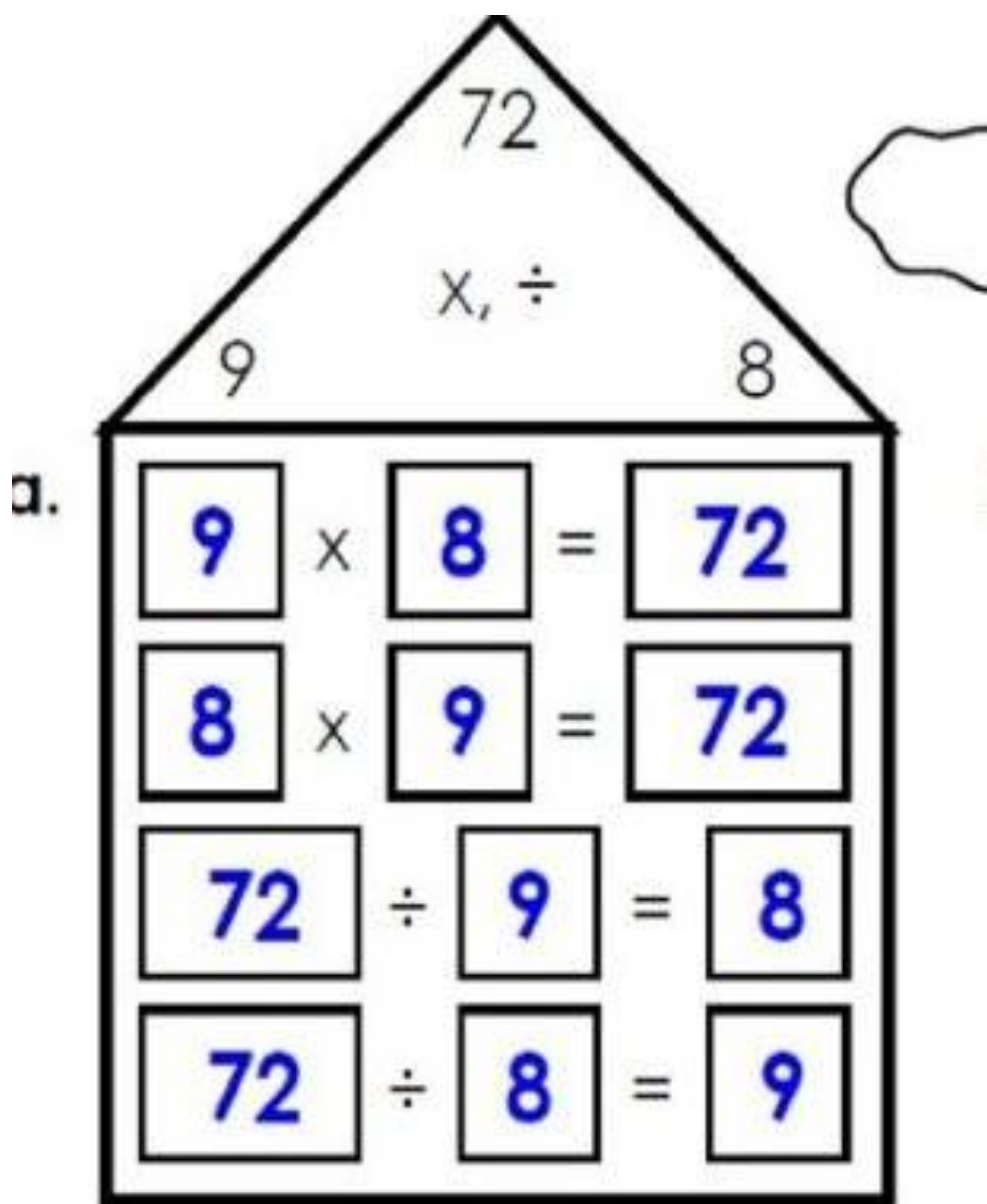
Arrays are key, children should be pulling apart/putting together and physically experiencing this relationship.



6. Fact families

4×5 5×4 $20 \div 5$ $20 \div 4$

Once children start to explore number families their working memory increases.



7. Ordering

The order you teach multiplication is key. It is important children are taught in a particular order.

If you were teaching the 6 times table you should:

1. Use 1×6 , 2×6 , 5×6 , 10×6 first to build on confidence and their most secure numbers.
2. Add in 3×6 , 4×6 once the others are **SECURE**.
3. Follow with 6×6 , 7×6 , 8×6 .
4. When looking at 9×6 , 11×6 and 12×6 children need to be taught to look at finding 10×6 and adjusting.

8. Teach Strategies

Teach children strategies to help them:

Fingers for 9's

Double 3x to get 6x

Multiples of 10 end in 0

Multiples of 5 end in 0/5

Teach odd/even multiples

Distributive multiplication

$6 \times 8 = ?$

Break 8 up into two easier #'s...

$6 \times 8 = 6 \times (5 + 3)$
 $= (6 \times 5) + (6 \times 3)$
 $= 30 + 18$
 $= 48$

Multiples from previous years need to be built on and related to new multiples.

Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
2	2	2	2	2	2
5	5	5	5	5	5
10	10	10	10	10	10
	3	3	3	3	3
		4	4	4	4
		8	8	8	8
			7	7	7
			9	9	9
			6	6	6

Support to teach fact families.

