

Overview of Strategies for Learning Multiplication Facts • Notes for Families

Instead of learning facts in regular numerical order try this sequence for better results. Using this order gets at facts that are easier to learn through patterns and leaves the hardest ones to memorize later.

x 2 facts

Most children are used to counting by 2's so multiplying by 2 brings familiar numbers for answers. Just use the games in this packet to lock in the patterns.

x 2	$0 \times 2 = 0$	$1 \times 2 = 2$	$2 \times 2 = 4$	$3 \times 2 = 6$	$4 \times 2 = 8$
	$5 \times 2 = 10$	$6 \times 2 = 12$	$7 \times 2 = 14$	$8 \times 2 = 16$	$9 \times 2 = 18$
Remember to practice facts both ways - e.g. $8 \times 2 = 16$ and $2 \times 8 = 16$					

x 5 facts

Most children are also used to counting by 5's so multiplying by 5 also brings familiar numbers for answers. Just use the games in this packet to lock in the patterns.

x 5	$0 \times 5 = 0$	$1 \times 5 = 5$	$*2 \times 5 = 10$	$3 \times 5 = 15$	$4 \times 5 = 20$
	$5 \times 5 = 25$	$6 \times 5 = 30$	$7 \times 5 = 35$	$8 \times 5 = 40$	$9 \times 5 = 45$
Remember to practice facts both ways - e.g. $7 \times 5 = 35$ and $5 \times 7 = 35$					

x 0 x 1 facts

Zero and one are easy to do if a child doesn't confuse them with what 0 and 1 do in addition. Help your child think of stories to be sure they are multiplying by zero and one correctly. E.g. If you have 4 boxes of no (0) cookies you have 4 zeroes ($0 + 0 + 0 + 0$) so you have nothing. Or if you have no (zero) boxes of 4 cookies you don't have any boxes of cookies so you have zero cookies. If you have 1 box of 4 cookies you have just four cookies - the same number as the set of things. If you have a box of 1 cookie four times you have $1 + 1 + 1 + 1$ or 4 cookies.

x 0	$0 \times 0 = 0$	$1 \times 0 = 0$	$*2 \times 0 = 0$	$3 \times 0 = 0$	$4 \times 0 = 0$
	$*5 \times 0 = 0$	$6 \times 0 = 0$	$7 \times 0 = 0$	$8 \times 0 = 0$	$9 \times 0 = 0$
x 1	$0 \times 1 = 0$	$1 \times 1 = 1$	$*2 \times 1 = 2$	$3 \times 1 = 3$	$4 \times 1 = 4$
	$*5 \times 1 = 5$	$6 \times 1 = 6$	$7 \times 1 = 7$	$8 \times 1 = 8$	$9 \times 1 = 9$
Remember to practice facts both ways - e.g. $7 \times 0 = 0$ and $0 \times 7 = 0$					

x 9 facts

Nines in multiplication create some nice patterns since 9 is close to 10 and our number system is based on tens.

x 9	*0 x 9 = 0	*1 x 9 = 9	*2 x 9 = 18	3 x 9 = 27	4 x 9 = 36
	*5 x 9 = 45	6 x 9 = 54	7 x 9 = 63	8 x 9 = 72	9 x 9 = 81
Remember to practice facts both ways - e.g. 7 x 9 = 63 and 9 x 7 = 63					

The answer to a number times 9 always starts with a number in the tens place that is one less than the number you are multiplying x 9. The ones place is the number you would need to add to that one to equal 9.

2 x 9 = 18 (the answer starts with 1 and 8 more = 9 so the answer is 18)

3 x 9 = 27 (the answer starts with 2 and 7 more = 9 so the answer is 27)

4 x 9 = 36 (the answer starts with 3 and 6 more = 9 so the answer is 36)

5 x 9 = 45 (the answer starts with 4 and 5 more = 9 so the answer is 45)

6 x 9 = 54 (the answer starts with 5 and 4 more = 9 so the answer is 54)

7 x 9 = 63 (the answer starts with 6 and 3 more = 9 so the answer is 63)

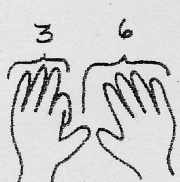
8 x 9 = 72 (the answer starts with 7 and 2 more = 9 so the answer is 72)

9 x 9 = 81 (the answer starts with 8 and 1 more = 9 so the answer is 81)

Note: 1 x 9 = 9 (the answer starts with 0 and 9 more = 9 so the answer is 09 which we usually write just as 9)

Another way to quickly see the answers to 9's facts is to use your ten fingers. Put your hands up with thumbs in the middle. Number your fingers from 1 to 10.

Look at the number you are multiplying x 9 and bend down the finger for that number. To the left of the bent finger is the first digit of your answer; to the right of the bent finger is the second digit.



$$9 \times 4 = 36$$



$$7 \times 9 = 63$$

Bend your fourth finger down.

Bend your seventh finger down.

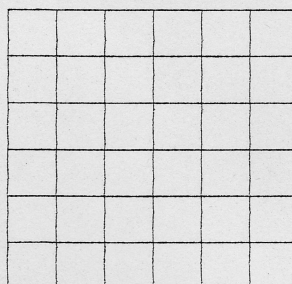
While these strategies seem time consuming, they lock in the patterns for the x 9 facts. It is better to have a way to get the right answers rather than just guessing at answers. Practice will lock the facts into your memory if you practice the right ones.

Doubles facts

These are the facts where you multiply the same number times itself.

Doubles	$*0 \times 0 = 0$	$*1 \times 1 = 1$	$*2 \times 2 = 4$	$3 \times 3 = 9$	$4 \times 4 = 16$
	$*5 \times 5 = 25$	$6 \times 6 = 36$	$7 \times 7 = 49$	$8 \times 8 = 64$	$*9 \times 9 = 81$

It helps to make a picture of these numbers - they make a square because they are the same length across and down the sides. E.g. six rows of 6 or 6×6 looks like this:



$$6 \times 6 = 36$$

$\times 3 \times 4$ facts

Threes and fours are easy after your child has learned all the other groups first. There are not too many facts to learn now. If memorizing these facts is hard, your child can always think about $\times 3$ as doing $\times 2$ and then adding another group. E.g. 3×7 is the same as 2×7 which is 14 and then add on another group of 7 to make 21.

If fours are hard for your child, he/she can think about $2 \times$ the number twice. E.g. 4×7 is the same as 2×7 and 2×7 which is $14 + 14$ which is 28.

$\times 3$	$*0 \times 3 = 0$	$*1 \times 3 = 3$	$*2 \times 3 = 6$	$*3 \times 3 = 9$	$4 \times 3 = 12$
	$*5 \times 3 = 15$	$6 \times 3 = 18$	$7 \times 3 = 21$	$8 \times 3 = 24$	$*9 \times 3 = 27$
$\times 4$	$*0 \times 4 = 0$	$*1 \times 4 = 4$	$*2 \times 4 = 8$	$3 \times 4 = 12$	$*4 \times 4 = 16$
	$*5 \times 4 = 20$	$6 \times 4 = 24$	$7 \times 4 = 28$	$8 \times 4 = 32$	$*9 \times 4 = 36$
Remember to practice facts both ways - e.g. $7 \times 4 = 28$ and $4 \times 7 = 28$					

x 6 x 7 x 8 facts

Your child is now just down to 3 facts to learn: 6×7 , 6×8 and 7×8 and the 3 facts that are formed by rearranging the numbers (7×6 , 8×6 and 8×7). Three facts are not too much to learn now! Just try the games in this packet to lock these facts into memory.

x 6	*0 x 6 = 0	*1 x 6 = 6	*2 x 6 = 12	*3 x 6 = 18	*4 x 6 = 24
	*5 x 6 = 30	*6 x 6 = 36	7 x 6 = 42	8 x 6 = 48	*9 x 6 = 54
x 7	*0 x 7 = 0	*1 x 7 = 7	*2 x 7 = 14	*3 x 7 = 21	*4 x 7 = 28
	*5 x 7 = 35	6 x 7 = 42	*7 x 7 = 49	8 x 7 = 56	*9 x 7 = 63
x 8	*0 x 8 = 0	*1 x 8 = 8	*2 x 8 = 16	*3 x 8 = 24	*4 x 8 = 32
	*5 x 8 = 40	6 x 8 = 48	7 x 8 = 56	*8 x 8 = 64	*9 x 8 = 72
Remember to practice facts both ways - e.g. $7 \times 8 = 56$ and $8 \times 7 = 56$					