

Our Mathematics curriculum is carefully planned to ensure children develop and build on their mathematical knowledge and understanding and have lots of opportunities to revisit these elements of their learning to make sure they become confident mathematicians and can remember and use their skills efficiently.

The Importance of Times Tables Knowledge and Recall

Knowing times tables facts is a very important part of maths learning and being able to quickly remember and use maths learning and facts accurately supports children as they learn more and progress through the mathematics curriculum.

Many mental maths activities require a quick recall of multiplication and division facts and children who are secure in their times tables knowledge are therefore able to complete these tasks accurately and efficiently.

It is worth explaining what we mean by 'knowing' times tables facts.

A child who knows their times tables will be able to recall any of the multiples of a times tables in any order quickly. The latest government expectation is that children will be able to recall times tables facts within 6 seconds by the end of Year 4. Securely knowing times tables facts includes the ability to recall and know the corresponding division fact for any multiplication question - i.e. $4 \times 6 = 24$ as well as $24 \div 6 = 4$.

Times Tables Expectations

Below are the times tables your child should know as a minimum by the end of each academic year. This is in line with national expectations.

By the end of Year 1	By the end of Year 2	By the end of Year 3	By the end of Year 4	By the end of Year 5	By the end of Year 6
Record sequences of twos, fives and tens.	2, 5, 10 including division facts.	2, 3, 4, 5, 8, 10 including division facts.	All times tables up to 12×12 with division facts.	As Year 4	As Year 4

"Pupils should be taught to recall multiplication and division facts for multiplication tables up to 12×12 ." - GOV.UK

Until recently, there has been no formal measure to judge whether children in England have learnt their times tables or not. A Multiplication Tables Check will now be taken towards the end of Year 4 to make sure children are meeting the benchmark of memorising their times tables up to 12×12 before moving up to Upper Key Stage 2 (Year 5 and Year 6).

Who will take the times tables test?

The Multiplication Tables Check is only being rolled-out to schools in England. Children will sit the new times tables test in June 2020 - meaning it will be mandatory for all children starting Year 4 in September 2019.

All state schools in England, including maintained schools, special schools, academies and free schools will be required to enter their children for the Multiplication Tables Check.

What is the test's format?

The Multiplication Tables Check has been described as "an online, on-screen digital assessment" - meaning the children will take the test on a desktop computer, laptop or tablet (such as an iPad) at school.

The 'Soundcheck' mode on TT Rockstars is the same format as the Tables Check.

Learning Times Tables

The key to learning times tables is frequent repetition and regular revision. Ideally, these revision sessions will be taking place regularly as learning studies show that recalling facts and remembering more over time is more successful when children recall information more frequently. For example, 5 to 10 minutes every day is better than an hour a week.

Here are some ideas to help your child memorise and revisit their multiplication and division facts. There will be lots of other ways to practise, but we hope these help to get you thinking -

1. **Using Times Tables Rock Stars** This app prompts children to remember their multiplication and division facts.

2. **Chanting** When beginning to learn a times table this is key. Repeatedly reading and hearing a times table will help your child become familiar with the multiples for that times table. When using this method, try and keep a rhythm, changing vocabulary regularly (two times three is six, two threes are six, two lots of three are six etc.) Clapping or marching may help with keeping the rhythm going.

3. **Flash Cards** Make a set of cards for the times table being learnt by putting a question on one side of the card ($6 \times 5 =$) and the answer on the reverse (30). Go through the cards reading the question and then turning over to see the answer. Try and say the answer before you turn over. When familiar with the multiplication table, the cards can then be shuffled and used in a random order.

4. **Testing and Timing** Make this fun. When your child has become more confident at learning a particular times table, ask them questions on it and see how many they can get correct in a particular time. Alternatively, write some questions out of order and get them to time how long it takes to complete the questions. Can they beat their time and score? (see <http://www.online-stopwatch.com>) for a variety of different timers.

5. **Using a multiplication Square** A multiplication square is particularly useful for establishing the link between multiplication and division facts but can also be used instead of a times tables list. When children are more confident with their times tables knowledge, a blank multiplication square can be filled in. Time your child to complete their square or see how many multiples they can complete in a set time. Can they beat their score and time?

×	1	2	3	4	5	6	7	8	9	10
1	1	2	3	4	5	6	7	8	9	10
2	2	4	6	8	10	12	14	16	18	20
3	3	6	9	12	15	18	21	24	27	30
4	4	8	12	16	20	24	28	32	36	40
5	5	10	15	20	25	30	35	40	45	50
6	6	12	18	24	30	36	42	48	54	60
7	7	14	21	28	35	42	49	56	63	70
8	8	16	24	32	40	48	56	64	72	80
9	9	18	27	36	45	54	63	72	81	90
10	10	20	30	40	50	60	70	80	90	100

6. **Times Tables Games** Bingo is a great way of learning times tables as a family. Write 6 multiples from a particular times table down in a grid and the caller reads out questions from the same multiplication table. Rolling dice and multiplying the numbers together is a good way to compete with each other to get the correct answer first. Two dice can be rolled at once to create all questions up to 12×12 . A similar game can be created with playing cards where two cards are chosen and their values multiplied together. The Jack, Queen and King need to be 11, 12 and 0. To help with division, each player chooses and writes down five of the following

numbers: 5, 6, 8, 9, 12, 15, 20, 30, 40 and 50. Take it in turns to roll a dice and if the number you roll is a factor of one of your numbers, cross it out. E.g. if a 4 is rolled it goes into 8 so cross out 8. If 1 is rolled, you miss a go; if 6 is rolled you get an extra turn. The winner crosses all of their numbers out first.

7. **Online Resources** There are many free multiplication and division games available online.

www.multiplication.com www.coolmath-games.com

http://www.transum.org/tables/times_tables.asp

www.tablestest.com [https://](https://www.bbc.co.uk/teach/supermovers)

www.bbc.co.uk/teach/supermovers

8. **Quick Questions Anywhere** A few questions here and there are much better than hundreds in one go. • On the way to school • Before bed • Whilst getting dressed

Top Times Tables Hints

It may seem a daunting task to learn so many multiplication facts, but because of the commutative property of multiplication, there are fewer facts than you may think. For example, 3×4 and 4×3 give the same answer so you need to only learn this once.

Zero Times Table

Anything multiplied by zero will always equal zero. Multiplication is repeated addition so 3×0 is $0 + 0 + 0$, which equals 0.

One Times table

Any number multiplied by one is itself.

Two Times Table

Any number multiplied by two is double the number. $7 \times 2 = 14$ $7 + 7 = 14$ double 7 is 14

Three Times Table

Digits within this times table add up to multiples of 3. For example: 3, 6, 9, 12 ($1+2=3$), 15 ($1+5=6$), 18 ($1+8=9$), 21 ($2+1=3$), 24 ($2+4=6$) etc. The numbers also follow the pattern of: odd, even, odd, even (3,6,9,12).

Four Times Table

The four times table is double the two times table. $4 \times 2 = 8$, $4 \times 4 = 16$, 16 is double 8. Alternatively, the fours can be thought of as double double. So double 3 (6) and double again (12) is the same as $3 \times 4 = 12$.

Five Times Table

All multiples of 5 end in five or zero. For even numbers (e.g. 8×5) you can halve the number (4) and then put a zero after it (40). For odd numbers (e.g. 7×5) you can subtract one from the number (6), halve it (3) and then put a 5 after it (35). Any odd number times 5 ends in a 5. Any even number times 5 ends in 0.

Six Times Table

The six times table is double the three times table. So $5 \times 3 = 15$, $5 \times 6 = 30$, 30 is double 15.

Seven Times Table

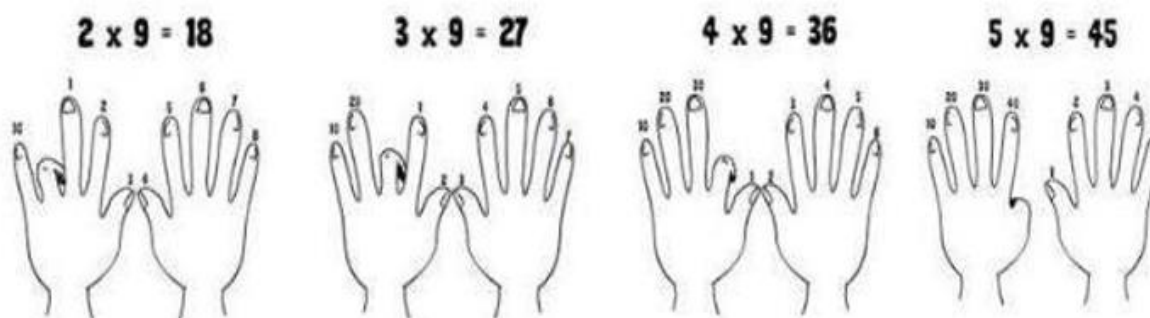
Combine the 5 and the 2 times table: $7 \times 4 = 28$ or $(5 \times 4) + (2 \times 4) = 28$

Eight Times Table

The eight times table is double the four times table. So $7 \times 4 = 28$, $7 \times 8 = 56$, 56 is double 28. The units in the multiples of eight also go down in twos. 8, 16, 24, 32, 40, 48, 56, 64, 72, 80 (8, 6, 4, 2, 0, 8, 6, 4, 2, 0).

Nine Times Table

Fingers can be used to work out the nine times table up to 10×9 . The first finger is put down for 1×9 and the remaining fingers show 9 ones ($1 \times 9 = 9$). Then the second finger is put down for 2×9 and the remaining fingers show 1 ten (to the left) and 8 ones (to the right) which equals 18, and so on. For example:



The digits found in the multiples of nine when added together also equal nine. For example: $9 = 9$, $18 (1 + 8) = 9$, $27 (2 + 7) = 9$, $36 (3 + 6) = 9$, $45 (4 + 5) = 9$ etc.

Ten Times Table

All the digits in the ten times table end in zero.

Eleven Times Table

Most of the multiples in the eleven times table are recalled by putting two of the number side by side. $7 \times 11 = 77$, $8 \times 11 = 88$

Twelve Times Table

The ones in the twelve times table go up in twos. 12, 24, 36, 48, 60, 72, 84, 96, 108, 120, 132, 144 (2, 4, 6, 8, 0, 2, 4, 6, 8, 0). The multiples of 12 are also the multiples of 10 and the multiples of 2 combined

Supporting Your Child

As with all learning, children who benefit from consistent experiences at home and in school are the most successful. This means that when children are learning multiplication facts this will be the most effective when there is collaboration between school and parents in how children are supported and encouraged and provided with regular opportunities to practise their skills. Children regularly spend time learning times tables in school but a child will be much more successful if they also practise outside of school independently and alongside parents as this ensures there are many more times children will revisit and recall their knowledge.

Times Tables Vocabulary

Here are some words that may be used whilst learning and applying multiplication and division. multiply, divide, prime, product, once, twice, three times, lots of, repeated addition, times, factors, array, row, column, double, repeated subtraction, multiple, sets of, remainder, halve

Here are some of the trickier words defined:

Factor - One number is a factor of another if it divides or 'goes into' it exactly (without any left over, a remainder). E.g. 6 is a factor of 30 because it goes into it 5 times but is not a factor of 33 because after dividing there is a remainder of 3.

Groups of/ lots of/ sets of - 3 groups of 5 are 15, 3 lots of 5 are 15, 3 sets of 5 are 15 ($3 \times 5 = 15$).

Multiple - These are the numbers that you find in a times table. E.g. 20 is a multiple of 5, 4, 2 and 10 because it is found in all of those times tables. The multiples of 5 are 5, 10, 15, 20 etc.

Product - A product is the answer you get when you multiply two or more numbers together. E.g. the product of 3 and 4 is 12 ($3 \times 4 = 12$).

Prime - A prime number will only divide equally between 1 and itself e.g. 7, 11. The first ten prime numbers are: 2,3,5,7,11,13,17,19,23,29.

Array - As shown, an array is a visual representation of multiplication. Shown are 3 rows of 5 with 15 in total.



If you have any further questions about learning times tables, please don't hesitate to speak to your child's class teacher.