

X	1	2	3	4	5	6	7	8	9	10	11	12
1	1	2	3	4	5	6	7	8	9	10	11	12
2	2	4	6	8	10	12	14	16	18	20	22	24
3	3	6	9	12	15	18	21	24	27	30	33	36
4	4	8	12	16	20	24	28	32	36	40	44	48
5	5	10	15	20	25	30	35	40	45	50	55	60
6	6	12	18	24	30	36	42	48	54	60	66	72
7	7	14	21	28	35	42	49	56	63	70	77	84
8	8	16	24	32	40	48	56	64	72	80	88	96
9	9	18	27	36	45	54	63	72	81	90	99	108
10	10	20	30	40	50	60	70	80	90	100	110	120
11	11	22	33	44	55	66	77	88	99	110	121	132
12	12	24	36	48	60	72	84	96	108	120	132	144

Rules

The following rules always apply:

$E \times E = E$ $E \times O = E$ $O \times E = E$ $O \times O = O$

(E means even; O means odd)

Useful websites

www.multiplication.com

www.mathszone.co.uk

www.mathletics.co.uk

www.topmarks.co.uk/maths-games/7-11-years/times-tables

<http://www.primaryhomeworkhelp.co.uk/maths/timestable/index.html>



TIMES TABLES STRATEGIES AND GAMES



Times Table Guideline

When learning times tables, it is really important for children to notice patterns – this can make the whole learning process much easier.

There are also strategies involving ‘easier’ times tables.

The national expectation is that children will be able to respond to any times table within 5 seconds.

This booklet is designed to help parents support their children to reach this expectation, in partnership with the School.

Remember whenever you learn one times table you get one free. So children actually reduce the number of times tables they need to learn by two, each time they learn one.

$$3 \times 7 = 21 \quad \text{so, } 7 \times 3 = 21$$

Triple whammy! Children should be secure in their knowledge of triples, the sets of three numbers linked together by multiplication and division, e.g. 3, 8, 24.

Children should learn four facts from each times table fact they learn:

$$3 \times 8 = 24, 8 \times 3 = 24, 24 \div 8 = 3 \text{ and } 24 \div 3 = 8$$

It also helps if children can double, not only for the two times table.

Doubling can also help children quickly remind themselves of other facts they may have forgotten.

$$\text{Double six: } 2 \times 6 = 12$$

$$\text{Double again: } 4 \times 6 = 24$$

$$\text{Double again: } 8 \times 6 = 48$$

How to take the grind out of learning times tables

When learning the:

- 4 and 8 times tables, use doubling the 2 times table to help
- 10 times table, use place value
- 5 times table: use the 10 times table and halve it
- 3 times table skip counting
- 6 times table: double the three times table
- 7 times table: commutativity, e.g. use what you know in reverse ‘ $7 \times 2 = 14$ ’ so ‘ $2 \times 7 = 14$ ’; ‘ $7 \times 5 = 35$ ’ so ‘ $5 \times 7 = 35$ ’.

Language of multiplication

multiplication		array	product of
twice	double	three times	groups of
repeated addition		lots of	multiple
times		multiply	

How else can I help?

Singing times tables

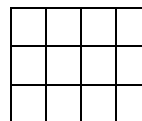
Singing tables can be a really good way for the children to learn. Most book shops and toy shops will have CDs of times tables songs that the children can sing along to, or you could always make up your own to a known tune!

Real life

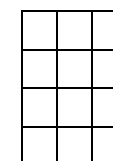
Use real-life situations to develop understanding of times tables, for example: “If you save 3p every day, how much do you think you would have saved in a week?”

Arrays

Multiplication is commutative, which means that it doesn’t matter which way around the numbers go, so 3×4 is the same as 4×3 .



Here are 3 rows of 4 squares.



Here are 4 rows of 3 squares.

Both have 12 squares.

Ask your child to create different arrays using Smarties and look for the links between the three numbers.

Tips for learning some of the times table

4 x table:

Work out the four times table by doubling the two times table, e.g. 7×4 ; first $7 \times 2 = 14$ then $2 \times 14 = 28$

6 x table:

Work out the six times table by doubling the three times table.
 8×6 is the same as 4×6 doubled.

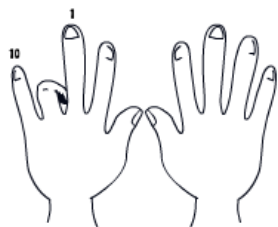
8 x table:

Work out the eight times table by doubling the four times table.

9 x table

Hold both hands in front of you with all of your fingers up (thumbs too).

Whatever number you are multiplying by, put that finger down.



$2 \times 9 =$

The number of fingers to the left of the downed one is the tens place, and the number to the right is the ones place.

For instance: $2 \times 9 = 18$

Put down the second finger of your left hand. There is one finger to the left, and eight fingers to the right. That gives 18, which is the right answer. This works for all of the first ten multiples of nine.

Games to play at home



Bingo!

Children draw a 2 by 4 grid and jot down 8 numbers from 1-36, roll a dice twice (or two dice) to create a multiplication calculation. Players cross out the answer to the calculation if they have it on their grid. *Which are good numbers to choose? Why?*

Extension:

If you have a 1-10 dice then children could select numbers from 1-100.

An alternative to dice would be digit cards.

Dominoes

Place dominoes face down on the table. Player one takes a domino. Multiply the two numbers together and say the answer. If they are correct they can keep the domino.

Continue the game with each player doing the same. The winner is whoever has the most dominoes at the end.

This game can be played with a set of dominoes, two playing cards or a home set of number cards focusing on a specific times table.

Beat the Clock

Shuffle 2 packs of 0 – 9 cards and choose the times table you are working on. Against the clock turn over a card and multiply it by your chosen times table, saying the answer to your partner. Players go through the pack as fast as they can, trying to beat previous times.

Extension:

Make number cards which have the answers to a given times table. When shown a card your child can tell you the associated multiplication fact e.g. if shown 36, they may say 6 lots of 6 or 6×6 .

More games to play at home

Flip 'n' Roll

Spin the spinner twice to generate a 2 digit number. Then flip the coin. Heads means multiply by 10 and tails means multiply by 100. The first to say the product (answer when 2 numbers are multiplied together) gets a point. The first to 10 points wins the game.

Extension:

Use 3 or 4 digit numbers to begin with, then move onto decimal numbers. Multiply by 10, 100 and 1000.



Fishy Fingers

Two players face each other and both chant 'fishy, fishy fingers (in the same way as you would if playing 'paper, scissors, stones')'. Both players show a number of fingers to each other. The first player to say the product (total when 2 numbers are multiplied together e.g. the product of 2 and 5 is 10) of the fingers shown scores a point. First player to 10 points wins.

Multiplication Choice

Players take it in turns to generate 3 digits. They use these to make a 2 digit and a 1 digit number and multiply them. They plot the answer on a 0 – 1000 number line. The first player to plot 4 numbers without their opponent's number in between wins.

Multiplication Snap

This game requires a deck of playing cards.

Flip over the cards as though you are playing Snap. The first player to say the fact based on the cards turned over e.g. two and a three = Say "6", wins the cards.

The winner is the player with all of the cards at the end of the game.

Even more games to play at home

Rhyme Time

Silly rhymes can help children learn some of the tricky tables, e.g. $8 \times 8 = 64$ He ate and ate until he was sick on the floor, eight times eight is 64.

$6 \times 6 = 36$ Swing from tree to tree on a vine, three times three is nine.

$7 \times 7 = 49$ Wakey, wakey, rise and shine, seven 7s are 49.

Children can write their own rhymes for the tricky multiplications.

Time challenge

This can be a really good way of helping times tables become automatic.

Create a speed tables grid (you only need to focus on a few numbers to begin with and these can be times tables that support one another) for your child to complete, time them and plot a graph to show how they improve.

Divisibility rules

The 2x table: always even and ends with 2, 4, 6, 8, or 0

The 3x table: the digit sum is 3, 6, or 9, e.g. $7 \times 3 = 21$ and $2+1=3$

The 4x table: always even and is still even after halving the last 2 digits

The 5x table: ends with 5 or 0

The 6x table: always even AND the digit sum is 3, 6, or 9

The 7x table: not really a great rule but... Double the last digit and subtract from the rest (the answer should be in the 7 times table).

The 8x table: halve the last 3 digits twice, and the result is even.

The 9x table: the digit sum is 9

The 10x table: ends with 0