

Learning Specific Times Tables

Tips and Tricks from Miss Badrick and Mrs Finn

Using a multiplication grid (up to 10×10). (A blank grid is attached for you to use below!)

\times	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

Patterns

- Notice the patterns in the multiplication tables: The numbers in the section to the right of the diagonal (white squares) are the same as in the section to the left of the diagonal. Or, in other words, the numbers in the darker shaded section are repeated in the lighter shaded section.
- The $10 \times$ table is just the 10s in order (10, 20, 30, 40 and so on). The $5 \times$ table has numbers ending in 5 and 0 alternately, while the first digit increases every 2 numbers.
- The $9 \times$ table has the units decreasing by 1 and the 10s increasing by 1 each time (up to 10×9)

The 2 x Table

1	×	2	=	2
2	×	2	=	4
3	×	2	=	6
4	×	2	=	8
5	×	2	=	10
6	×	2	=	12
7	×	2	=	14
8	×	2	=	16
9	×	2	=	18
10	×	2	=	20

A number is even when it can be divided by two without a remainder.

2 divided by 2 is 1.

10 divided by 2 is 5.

All even numbers can be divided by 2.

To find out if a number is in the 2 × table, look at the digit at the end. If a number ends in 0, 2, 4, 6, or 8 it is even and is a multiple of 2. 1,357,318 is a multiple of 2 because the digit at the end is 8.

Multiplying a number by 2 is the same as doubling it.

Double 6 is the same as 6×2 , which equals 12.

Dividing a number by 2 is the same as halving it.

Half of 10 is the same as $10 \div 2$ which equals 5.

The 3 x Table

1	×	3	=	3
2	×	3	=	6
3	×	3	=	9
4	×	3	=	12
5	×	3	=	15
6	×	3	=	18
7	×	3	=	21
8	×	3	=	24
9	×	3	=	27
10	×	3	=	30

There's a clever trick you can use to find out if a number is in the 3 x table!

Add up the digits of the number you want to find out about - this is called finding the digit sum. If the digit sum is 3, 6, or 9, then you know that it's in the 3 x table.

Let's look at 15. The digits are 1 and 5. Add those together and you get 6.

$1 + 5 = 6$. So 15 is in the 3 x table.

Now let's look at a bigger number: 156.

The digits are 1, 5 and 6. Add $1 + 5 + 6$ and you get 12.

Now add up the digits 1 and 2 and you get 3.

So 156 is in the 3 x table.

This trick always works, even with a really big number like

12,346,911! Just add up the digits: $1 + 2 + 3 + 4 + 6 + 9 + 1 + 1 = 27$ then add $2 + 7 = 9$. So 12,346,911 is in the 3 x table.

The 4 x Table

1	×	4	=	4
2	×	4	=	8
3	×	4	=	12
4	×	4	=	16
5	×	4	=	20
6	×	4	=	24
7	×	4	=	28
8	×	4	=	32
9	×	4	=	36
10	×	4	=	40

All the numbers in the 4 × table are even - they end with 0, 2, 4, 6 or 8.

You can work out a 4 × table calculation by doubling the number twice.

7 × 4 is the same as 7 × 2 × 2

7 × 2 = 14, then 14 × 2 = 28

Look at the last 2 digits of the number you want to find out about. If they are a multiple of 4, then the whole number is also a multiple of 4.

Let's look at the number 116. This is a multiple of 4 because 16 is in the 4 × table. You can reverse the calculation if that makes it easier.

Have a look at these coins: There are 5 piles with 4 coins in each. This is 5 lots of 4 or 5 × 4.

Count them up - there are 20.



You could also have 4 piles with 5 coins in each:

4 lots of 5 or 4 × 5.

The number of coins is the same.



The 5 x Table

1	×	5	=	5
2	×	5	=	10
3	×	5	=	15
4	×	5	=	20
5	×	5	=	25
6	×	5	=	30
7	×	5	=	35
8	×	5	=	40
9	×	5	=	45
10	×	5	=	50

This is an easy one. All multiples of 5 end in a 5 or a 0.

So 4,320 is in the 5 × table because it ends in a 0.

55,552 is not in the 5 × table because it ends in a 2.

5 is half of 10, so if you want to know what 5 × a number is you could multiply it by 10 and then work out half of the answer.

$10 \times 6 = 60$, so $5 \times 6 = \text{half of } 60 = 30$

The 10 x Table

1	×	10	=	10
2	×	10	=	20
3	×	10	=	30
4	×	10	=	40
5	×	10	=	50
6	×	10	=	60
7	×	10	=	70
8	×	10	=	80
9	×	10	=	90
10	×	10	=	100

This is another easy one. Numbers that are multiples of 10 always end in a: 0, 10, 20, 30, 40, 50, 60, 70, and so on.

You may have wondered why we placed the 10 x table after the 5 x table. The 10x table is double the 5 x table!

The 6 x Table

1	×	6	=	6
2	×	6	=	12
3	×	6	=	18
4	×	6	=	24
5	×	6	=	30
6	×	6	=	36
7	×	6	=	42
8	×	6	=	48
9	×	6	=	54
10	×	6	=	60

There's no easy trick for finding out if a number is in the 6 x table, but here are some tips:

- All the numbers in the 6 x table are even - they end with 0, 2, 4, 6 or 8.
- They are all a multiple of 3; they can be divided by 3.
- The digit sum is always 3, 6 or 9
- You can work out a 6 x calculation by multiplying the number by 3 (tripling it) and then doubling your answer

5×6 is the same as $5 \times 3 = 15$, then $15 \times 2 = 30$.

(You can also do this the other way round: $5 \times 6 = 5 \times 3 \times 2 = 15 \times 2 = 30$.)

Miss Badrick and Mrs Finn's favourite rhyme for 6 x 8.

"6 and 8 went on a date, they got married at 48!"

The 8 x Table

1	×	8	=	8
2	×	8	=	16
3	×	8	=	24
4	×	8	=	32
5	×	8	=	40
6	×	8	=	48
7	×	8	=	56
8	×	8	=	64
9	×	8	=	72
10	×	8	=	80

The numbers in the 8 x table are always even.

This means they can be divided by 2 without remainder.

If it's an odd number then it is not in the 8 x table!

Have a look at the 8 x table again.

1 x 8 =	8	←	8
2 x 8 =	16		6
3 x 8 =	24		4
4 x 8 =	32		2
5 x 8 =	40		0
6 x 8 =	48	←	8
7 x 8 =	56		6
8 x 8 =	64		4
9 x 8 =	72		2
10 x 8 =	80		0

The unit digits have a regular pattern - they go down in 2s.

Try reversing the order if you're having problems. 8×4 is the same as $4 \times 8 (= 32)$ so you can use the $4 \times$ table if you know it better.

OR

If you want to multiply by 8 you can double a number 3 times.

**For example: 8×6 : double 6 = 12
 double 12 = 24
 double 24 = 48
 $8 \times 6 = 48$**

Miss Badrick and Mrs Finn's favourite rhyme for 8×8 . It works best if you say it aloud!

"I ate and I ate and I was sick on the floor. 8×8 is 64!"

The 9 x Table

1	×	9	=	9
2	×	9	=	18
3	×	9	=	27
4	×	9	=	36
5	×	9	=	45
6	×	9	=	54
7	×	9	=	63
8	×	9	=	72
9	×	9	=	81
10	×	9	=	90

Look at the numbers on the right-hand side of the table above. Notice how the tens go up but the units go down. There's a good way to remember this table. All the digits in the 9 x table add up to 9.

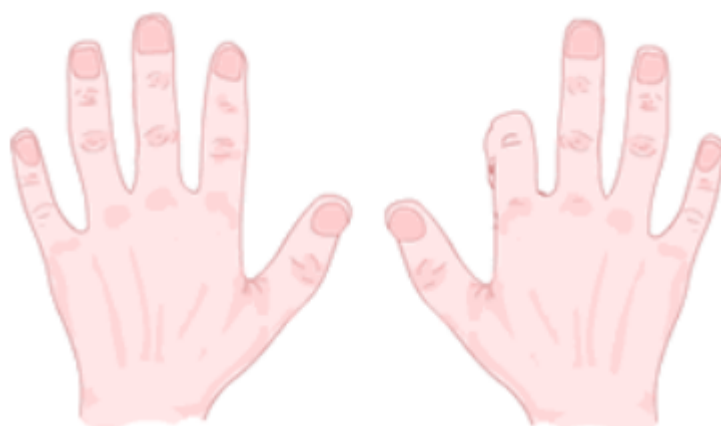
$$18 = 1 + 8 = 9$$

$$27 = 2 + 7 = 9$$

$$36 = 3 + 6 = 9$$

Our favourite method of ALL time for the 9 x Table:

What's 9×7 ? Hold out all 10 fingers and lower or bend the 7th finger. There are 6 fingers to the left (6 tens) of the bent finger and 3 fingers to its right (3 units). The answer is 63.



Look at the pattern to the right: the units' column goes down one at a time and the tens column goes up. You can also see how the 9 x table reverses itself!

(1 x 9)	09	~	90	(10 x 9)
(2 x 9)	18	~	81	(9 x 9)
(3 x 9)	27	~	72	(8 x 9)
(4 x 9)	36	~	63	(7 x 9)
(5 x 9)	45	~	54	(6 x 9)
(6 x 9)	54	~	45	(5 x 9)
(7 x 9)	63	~	36	(4 x 9)
(8 x 9)	72	~	27	(3 x 9)
(9 x 9)	81	~	18	(2 x 9)
(10 x 9)	90	~	09	(1 x 9)

The 12 x Table

$$\begin{aligned}0 \times 12 &= 0 \\1 \times 12 &= 12 \\2 \times 12 &= 24 \\3 \times 12 &= 36 \\4 \times 12 &= 48 \\5 \times 12 &= 60 \\6 \times 12 &= 72 \\7 \times 12 &= 84 \\8 \times 12 &= 96 \\9 \times 12 &= 108 \\10 \times 12 &= 120 \\11 \times 12 &= 132 \\12 \times 12 &= 144\end{aligned}$$

The 12 x Table can also be hard to remember, but luckily there is a simple trick for this table too! Akash Vukoti explains this best, watch the video below!

<https://www.youtube.com/watch?v=iL42jSttDFQ>

12 x 1 = 12	12	12 x 1 = 12
12 x 2 = 24	24	12 x 2 = 24
12 x 3 = 36	36	12 x 3 = 36
12 x 4 = 48	48	12 x 4 = 48
12 x 5 = 60	60	12 x 5 = 60
12 x 6 = 72	72	12 x 6 = 72
12 x 7 = 84	84	12 x 7 = 84
12 x 8 = 96	96	12 x 8 = 96
12 x 9 = 108	108	12 x 9 = 108
12 x 10 = 120	120	12 x 10 = 120