

Remember- Times tables and associated division facts go hand in hand!

Supporting Your Child at Home

Times Tables and Associated Division Facts

Helping your child learn their multiplication table facts and associated division facts is one of the best things you can do to help them. Little and often is the best way- 5 minutes practise on the way to the shops is ideal!

In order for your child to achieve 'rapid recall,' they should be able to comfortably answer a question within 5 seconds. They should know multiplication and division facts by heart without needing to calculate it.

Where to Begin:

When learning a particular times tables (y), always begin with the $0 \times y$, $1 \times y$ and $10 \times y$, as these are the easiest to remember. From here, $2 \times y$ and $5 \times y$ can easily be worked out by doubling the answer to $1 \times y$ and halving the answer to $10 \times y$. For example,

$$0 \times 2 = 0$$

$$1 \times 2 = 2 \quad 2 \times 2 = 4 \text{ (double answer to } 1 \times 2)$$

$$10 \times 2 = 20 \quad 5 \times 2 = 10 \text{ (halve the answer to } 10 \times 2)$$

Using a Multiplication Square:

- What patterns do you see?
- Can you see repetition of any numbers? Can you explain why? (*Commutative law, $3 \times 5 = 5 \times 3$*)
- Colour in multiples of 5. What do you notice? (*They end in 0 or 5*)
- What do you notice about multiples of 9? (*the sum of the 2 digits is always 9 e.g. $4 \times 9 = 36$, $3 + 6 = 9$*)
- Colour in the first 2 rows. Can you identify any equivalent fractions? (*$1/2 = 2/4 = 3/6 = 4/8$ etc.*)
- Colour in multiples of 2, 4 and 8. What are the common multiples? What is the lowest common multiple?
- Draw a box around 6 numbers making a rectangle. Multiply the two opposite corners. What do you notice? (*They total the same*)

	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	56	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

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Digital Roots:

Digital roots usually first appear when children discover patterns in the 9 times tables. They often notice that when the digits of each multiple are added together, it comes to 9. For example,

$$2 \times 9 = 18 \qquad 1 + 8 = 9$$

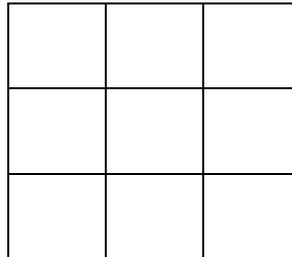
$$3 \times 9 = 27 \qquad 2 + 7 = 9$$

What do you notice about the digital roots in the 3 times tables?

Square Numbers:

The concept of square numbers can be very abstract. Drawing squares or making squares using counters can help children to begin to gain visual understanding.

$$2 \times 2 = 4, 3 \times 3 = 9, 4 \times 4 = 16, 5 \times 5 = 25, 6 \times 6 = 36, 7 \times 7 = 49, 8 \times 8 = 64, 9 \times 9 = 81 \dots$$



Calculators:

Key in $2 \div = 0$ then keep pressing = (Calculator counts on in steps of 2, starting at 0)

Key in $1 \div 2 = 1$ then keep pressing = (Calculator counts on in steps of 2, starting at 1)

- How many times do you have to press = before you reach 102? 51
- Is 312 a multiple of 3? Yes
- How many lots of 2 make 164? 82
- How many 4s are in 84? 21
- Is 192 a multiple of 6?