'Learning by Heart'

Developing children's knowledge of mathematical facts so that they know them 'by heart' is a valuable tool to support calculation strategies, and also helps to build confidence. Regular practice is needed to secure knowledge and help children instantly recall facts.

We encourage children to think 'Can I do this in my head?' Having a range of number facts at their fingertips really empowers the children and enables them to approach tasks with confidence.

Year 5 Autumn Term 1: Know multiplication and division facts for x9, x11 and x12 table

- Step 1 - Consolidate knowledge of times tables from x2 → x10, recalling the times tables in order

- Step 2 - Ask random times tables questions requiring a deeper knowledge and understanding of the number facts. Add the element of a 'time challenge' as your child becomes more efficient e.g. How many can you get right in 1 minute? or give a 10 second time limit per answer. Challenge your child to work out the answer before you can – adding some competition.

- Step 3 – Give the multiplication fact and ask for a linked division fact e.g. 3 x 12 = 36 …. child could answer with 36 ÷ 3 = 12 or 36 ÷ 12 = 3

- Step 11 – Recall of division facts 33 ÷ 11 = ?

For each set of times tables help your child to practice and learn the multiplication and division facts, example:

0 x 11 = 0	11 x 0 = 0		
1 x 11 = 11	11 x 1 = 11	11 ÷ 11 = 1	11 ÷ 1 = 11
2 x 11 = 22	11 x 2 = 22	22 ÷ 11 = 2	22 ÷ 2 = 11
3 x 11 = 33	11 x 3 = 33	33 ÷ 11 = 3	33 ÷ 3 = 11
4 x 11 = 44	11 x 4 = 44	44 ÷ 11 = 4	44 ÷ 4 = 11
5 x 11 = 55	11 x 5 = 55	55 ÷ 11= 5	55 ÷ 5 = 11
6 x 11 = 66	11 x 6 = 66	66 ÷ 11 = 6	66 ÷ 6 = 11
7 x 11 = 77	11 x 7 = 77	77 ÷ 11 = 7	77 ÷ 7 = 11
8 x 11 = 88	11 x 8 = 88	88 ÷ 11 = 8	88 ÷ 8 = 11
9 x 11 = 99	11 x 9 = 99	99 ÷ 11 = 9	99 ÷ 9 = 11
10 x 11 = 110	11 x 10 = 110	110 ÷ 11 = 10	110 ÷ 10 = 11
11 x 11 = 121	11 x 11 = 121	121 ÷ 11 = 11	121 ÷ 11 = 11
12 x 11 = 132	11 x 12 = 132	132 ÷ 11 = 12	132 ÷ 12 = 11

Practical ideas to help your child

Chanting is still an effective way to learn multiplication tables. Musical times tables tapes are also quite useful – children often learn the 'rhythm and rhyme' of a song quite quickly and therefore learn to recite and recall the facts.
It is really important that children are as confident with division facts as they are with multiplication facts.
Practice the idea of 'Family of facts' e.g.
if I know that 4 x 12 = 48 ….. I also know 12 x 4 = 48,
that 48 ÷ 12 = 4 and that 48 ÷ 4 = 12

Vocabulary

times	multiply	multiple of
lots of	groups of	divided by

Year 5 Autumn Term 2: Know all the decimals that total 1 or 10

For example:

0.1 + 0.9 = 1	0.5 + 9.5 = 10
0.2 + 0.8 = 1	1.5 + 8.5 = 10
0.3 + 0.7 = 1	2.5 + 7.5 = 10
0.4 + 0.6 = 1	3.5 + 6.5 = 10
0.5 + 0.5 = 1	4.5 + 5.5 = 10
0.6 + 0.4 = 1	5.5 + 4.5 = 10
0.7 + 0.3 = 1	6.5 + 3.5 = 10
0.8 + 0.2 = 1	7.5 + 2.5 = 10
0.9 + 0.1 = 1	8.5 + 1.5 = 10
	9.5 + 0.5 = 10

Practical ideas to help your child

- Encourage children to use their knowledge of number bonds to 10 to support number bonds to 100 e.g count quickly to the next multiple of 10 (tens number) then count on in tens until they reach 100
36 → 4 more makes 40 then 60 more makes 100 = 64

When working with decimals encourage the children to make links to number bonds to 10 and number bonds to 100. Many children find it easier to relate decimals to money e.g. 0.7 is the same as £0.70 → no pounds and 70 pence

Vocabulary

number bond	whole number	decimal
pair	less than 1	derive

https://www.topmarks.co.uk/maths-games/hit-the-button

https://www.timestables.co.uk/games/

http://www.snappymaths.com/multdiv/1to12xtab/interactive/newlook/timestablesintd.htm

https://www.primaryresources.co.uk/maths/mathsC2.htm

http://www.math-play.com/Decimals-Jeopardy/decimals-jeopardy-game_html5.html

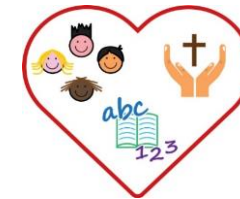https://www.math-salamanders.com/decimal-number-bonds-to-1.html

St Matthew's C.E. Primary Academy

Rapid Recall and Deriving Facts Year 5

Parent's and carer's guide to support children with the 'Learning by Heart' programme
Autumn Term