'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.

Summer Term 1: Know all 2-digit pairs that total 100

Practical ideas to help your child

- Time challenge: how many 2-digit numbers that add to 100 can you think of in 3 minutes? (kitchen timer)
- Regular 5 / 10 minute practice, quick-fire questions. 'Speed challenge': how many pairs of numbers that total 100 can you get right? Give a number between 10 – 90, child to quickly recall its partner to 100.
- Use a hundred square, choose a number from the square and quickly work out partner to 100.
- Encourage your child to be logical and develop a pattern, this helps to generate the numbers quickly and accurately.
- Play number ping pong!
Start by saying 'ping', child replies with 'pong'. Repeat and then convert to numbers i.e., say 33 and they reply 67.
- Roll two die treat them as the first as the tens digit and the second as the ones - ask how many more to make 100.

Four in a Row Game 2

This is a game for 2 players.
- Each player chooses a different coloured pencil.
- Take it in turns to choose 2 numbers on the grid that add together to make 100.
- If correct, colour them in.
- The first player to connect 4 numbers in a row, column or diagonally wins the game.

47	25	4	66	30
82	34	45	23	19
96	15	18	9	75
77	26	91	53	74
0	81	55	70	85

Example of number bonds to 100:

I have a metre of string. I use 67cm to wrap my parcel. How much string is left?

33cm are left!

Well done, that was quick!
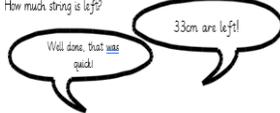
100	
33	

100	
	26

100	
41	

100	
	52

100	
	7

Vocabulary
partition   hundred   tens   units   derive
How many more to make 100?   100 minus _____ = _____

Multiplication Table

Division Table

Examples: 12 ÷4 =3 and 72 ÷9 =8

Practical ideas to help your child

Chanting is still an effective way to learn multiplication tables. Musical times tables CDs 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 7 = 28 ….. I also know 7 x 4 = 28, that 28 ÷ 7 = 4 and that 28 ÷ 4 = 7

- Pick a domino, add the number of dots together then multiply by the table they are working on. To extend to all times tables, pick two dominoes to multiply the total number of dots on each together.
- Timed Games: - How well are you doing? How many questions can you answer in 2 minutes? Can you beat your own record?
- A vending machine is broken and only takes 5p coins. How many coins do you need to pay for a bar of chocolate that costs 45p?
  9 coins!
  How did you work that out?   Well, the product of 9 and 5 is 45.
- There are 7 smarties on each bun, if we make 6 buns how many smarties will we need?
  42 smarties!
  Can you explain why? 7 lots of 6 are 42.
- A piece of ribbon measure 56cm in total. 8 cm are needed to make a bow. How many bows can we make?
  7 bows!
  Can you prove it to me? Well, there are seven, eights in 56.

Vocabulary
times   multiply   multiple of   lots of   groups of   divided by
shared   multiplied by   shared   product   factor   square number

https://www.topmarks.co.uk/maths-games/hit-the-button - number bonds to 100 and all times tables and division facts

https://www.mathswithmum.com/number-bonds-to-100/ - number bonds to 100

https://www.studyzone.tv/game275-code13fe7c386fa4ad7bb0ecdf05c8cec747 - timed number bonds to 100

https://wordwall.net/resource/11719110/number-bonds-100 - wheel spin to 100

https://www.topmarks.co.uk/times-tables/coconut-multiples - times tables

St Matthew's CE School and Nursery

Help your child to learn maths facts.
Year 5

Parent's and carer's guide to supporting children
with the 'Learning by Heart' programme
Summer 2021