



Parent Maths Evening

An information session on how you can best support
your child in Maths





Acknowledgement of Country



For generations, the Wodi Wodi people of the Dharawal nation lived on this country in harmony with the land, animals, water and sky.

We must always remember this land we walk on at school in Woonona, 'place of young wallabies', always was and always will be Aboriginal land.

We will be as respectful, caring and purposeful as the first custodians who came before us.

We would like to acknowledge the elders past, present and emerging and pay special respect to any Aboriginal people here today.





Our focus for this evening

- How learning in Maths has changed
- How we teach Maths at Woonona
- The research behind how students learn
- How you can best support your child at home



Number Talk

$$23 - 19$$

Hand Symbols



I'm still thinking.



I have an answer and a strategy.

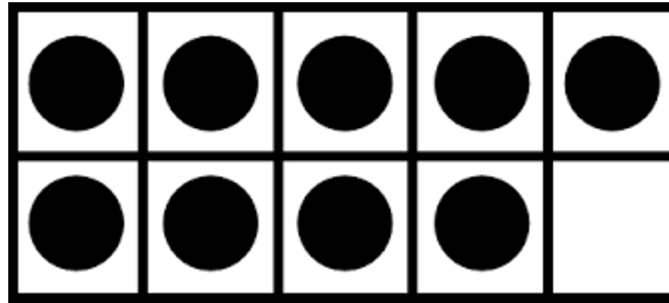


I have more than one strategy.



I agree.

Number Talk



Hand Symbols



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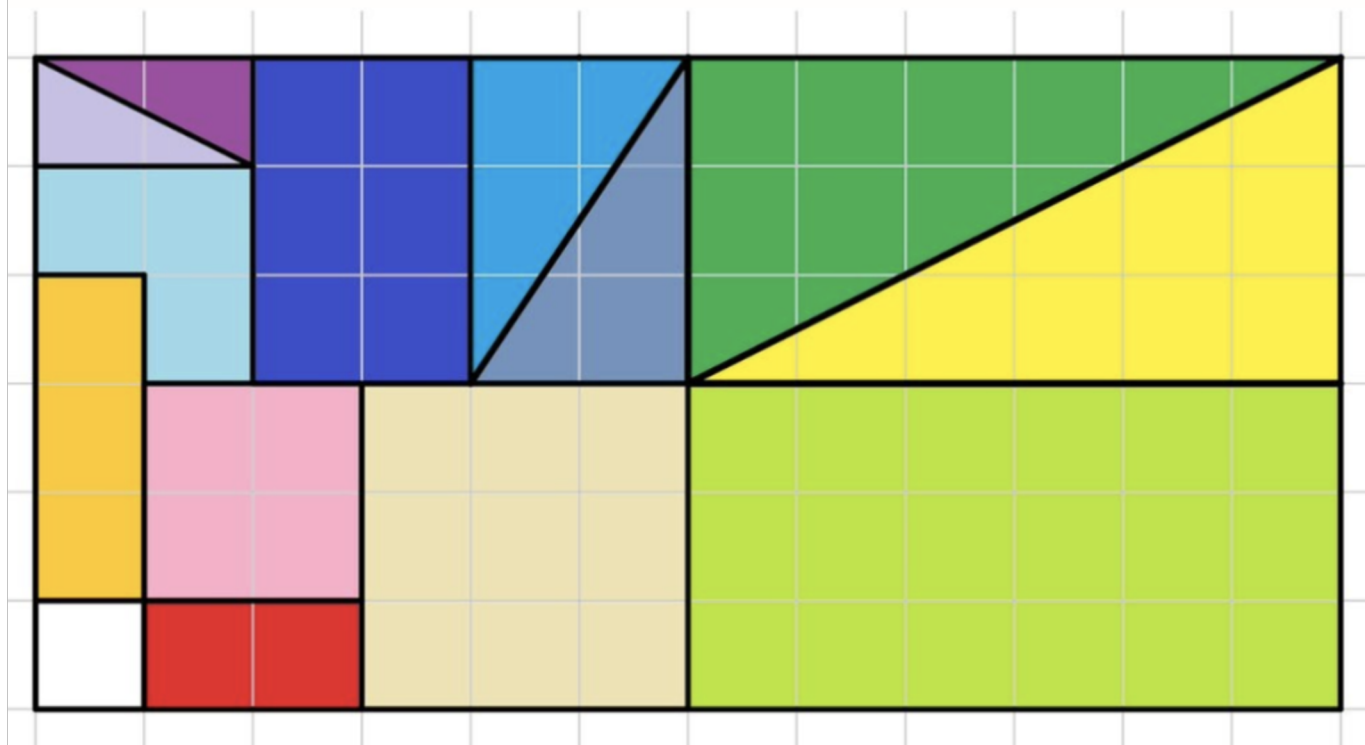
I have more than one strategy.



I agree.

Number Talk

If the lime green square is one whole what other fractions do you see?



Key points

Students see and hear the multiple ways of solving a problem



Students develop their fluency and reasoning with numbers

All students have an opportunity to share their thinking and understand that it's not always about getting the right answer

So how has teaching in Mathematics changed over time?

Then

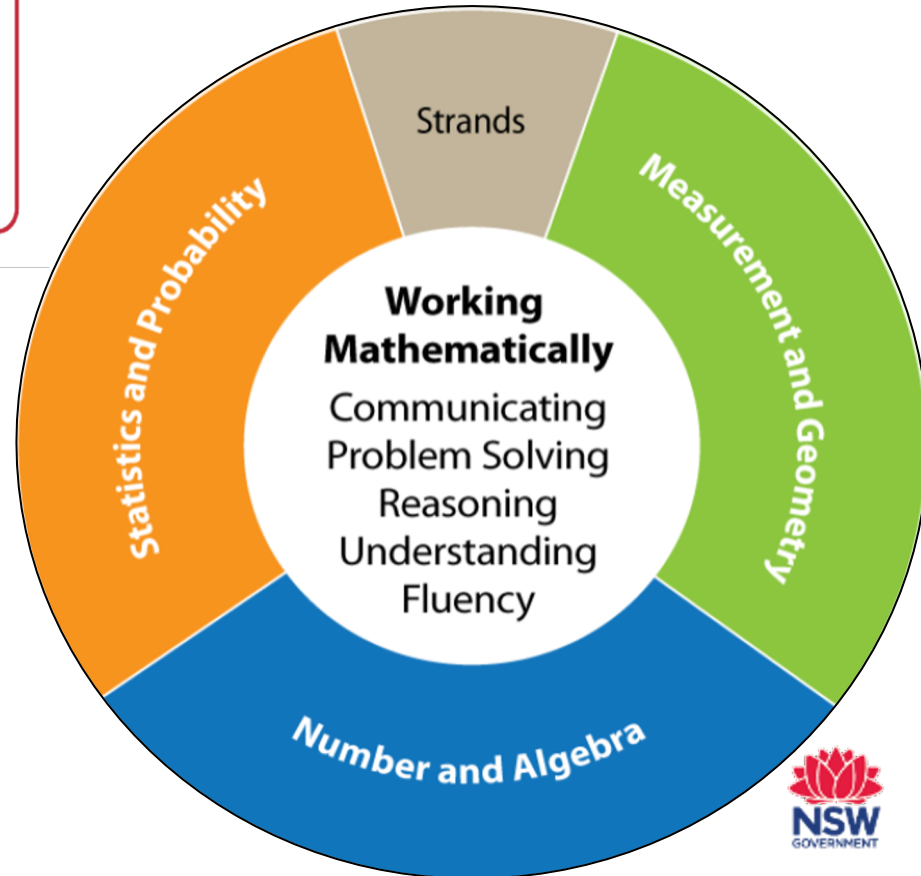
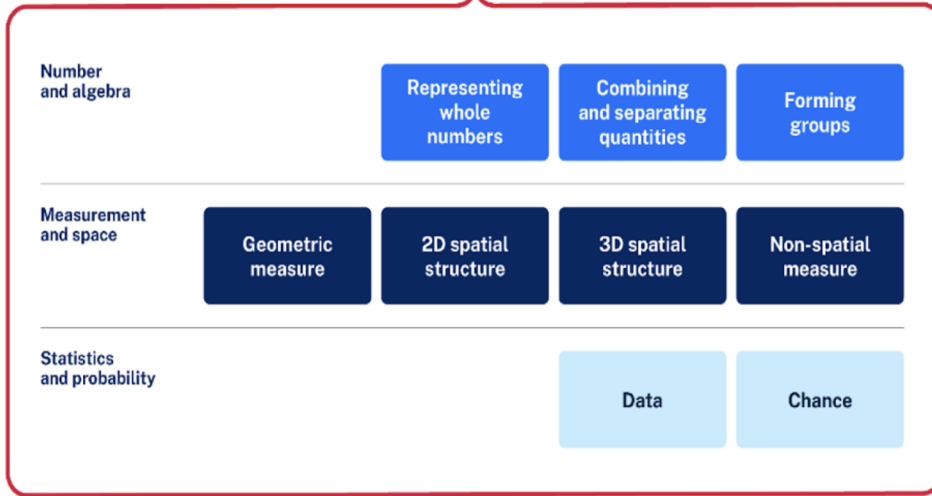
- First to answer
- The answer was all that mattered
- Times tables by rote learnt early
- Speed was important
- You were good at maths or you weren't
- Mental maths
- Learning the process in isolation
- Working individually
- Memorisation was key

Now

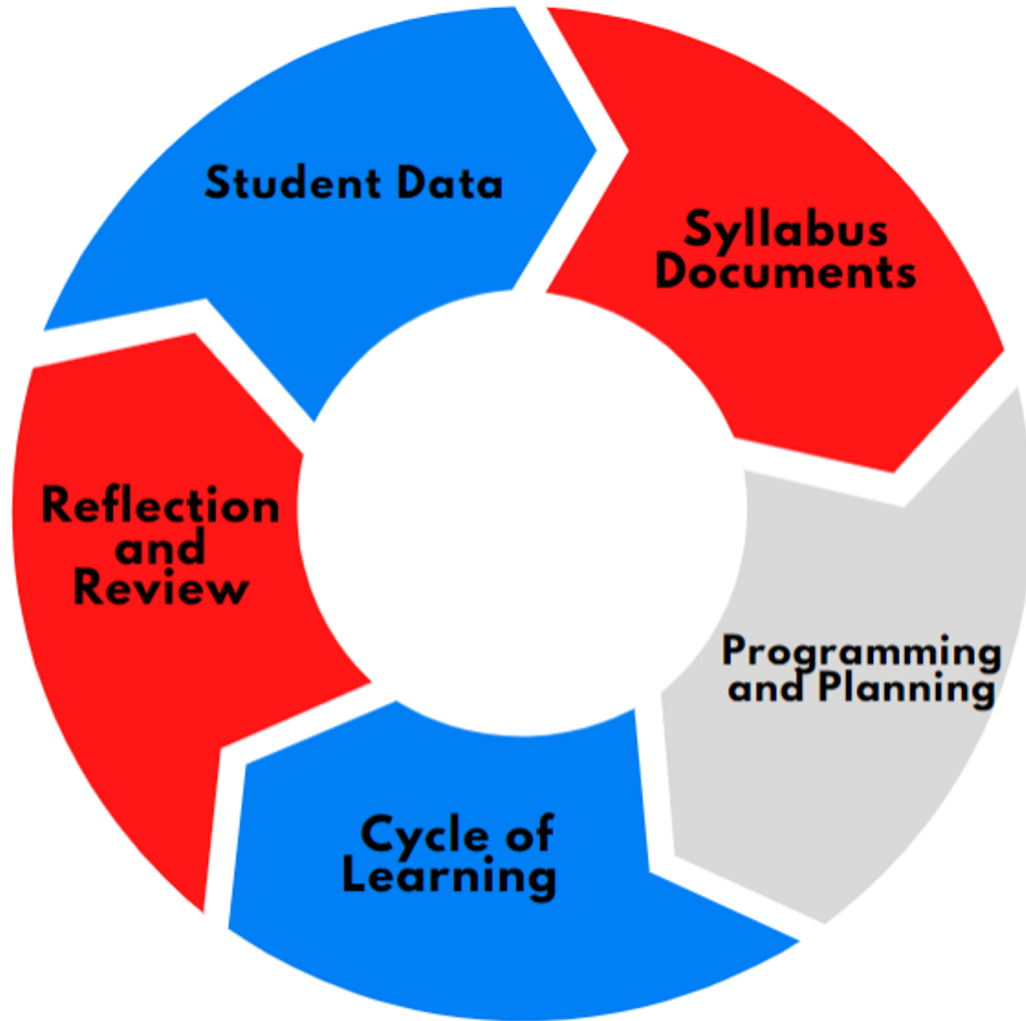
- Everyone gets an opportunity to share
- Everyone does the thinking
- Strategies before learning a 'process'
- Mathematicians work slowly because they think deeply - understanding over speed!
- Everyone has the capacity to learn maths to a high standard
- Hands-on learning first
- Working collaboratively
- We are all in the learning pit - mistakes and challenge are the best times for your brain
- We can use our fingers to count
- The language of maths is important
- More exploring, more doing, more 'seeing'

Syllabus Requirements

Working mathematically



Teaching and Learning Cycle in Maths



What does a maths lesson look like at Woonona?



Warm Up or Number Talk



Launch the lesson based on prior knowledge, introduce the vocabulary



Modelled 'I do'. Worked examples



Guided 'We do'. Hands-on experiences



**Independent 'You do'.
Differentiation = Mild, Spicy, Hot as well as rich tasks**



Reflect on the learning

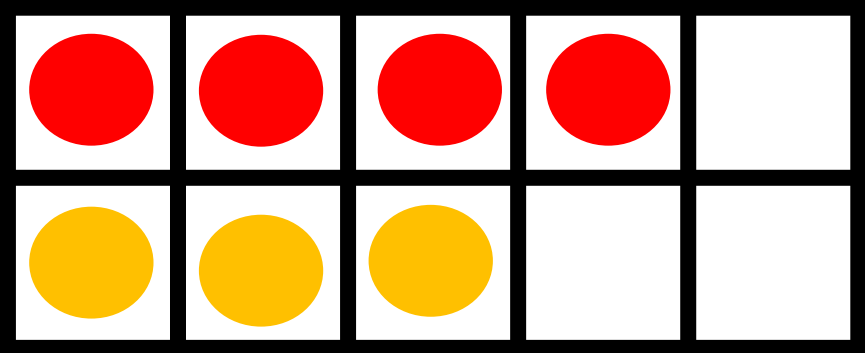
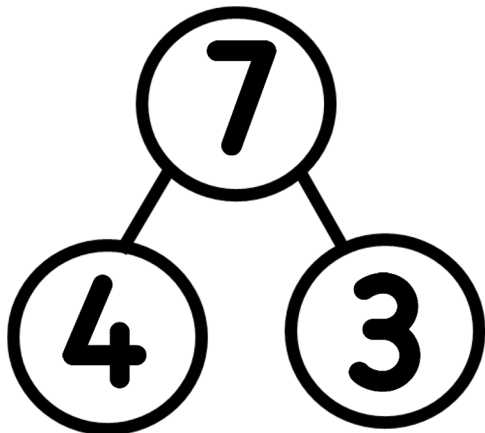
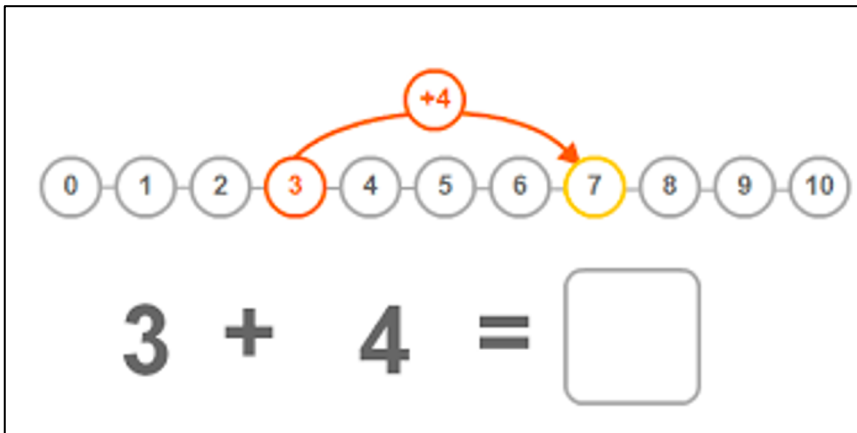
What does the research say?

‘One of the main aims of school mathematics is to create mental objects in the mind’s eye of children which can be manipulated flexibly with understanding and confidence.’

- Dianne Siemon




Kindergarten - Seeing numbers in terms of their parts




7 is

- 6 and 1 more, 1 and 6
- 1 less than 8
- 5 and 2, 2 and 5
- Double 3 and 1 more
- 3 and 4, 4 and 3
- 0 and 7

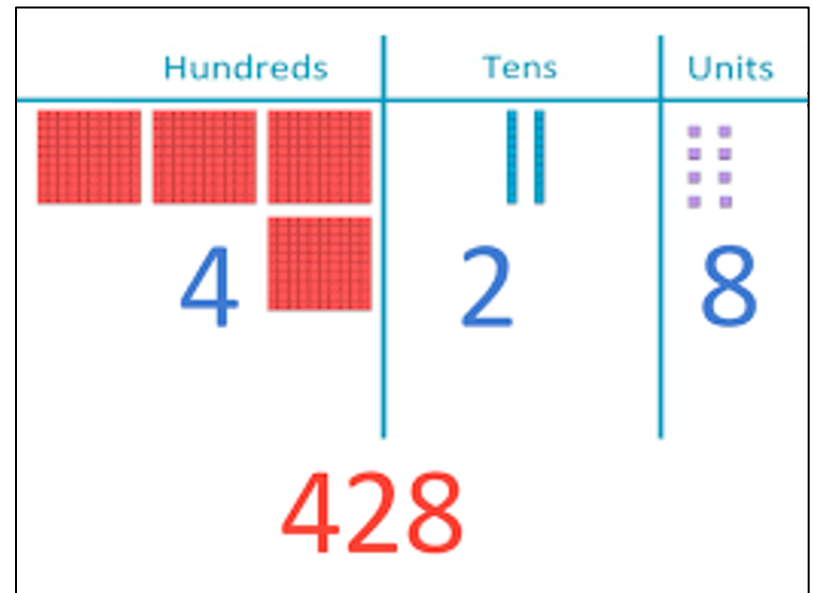
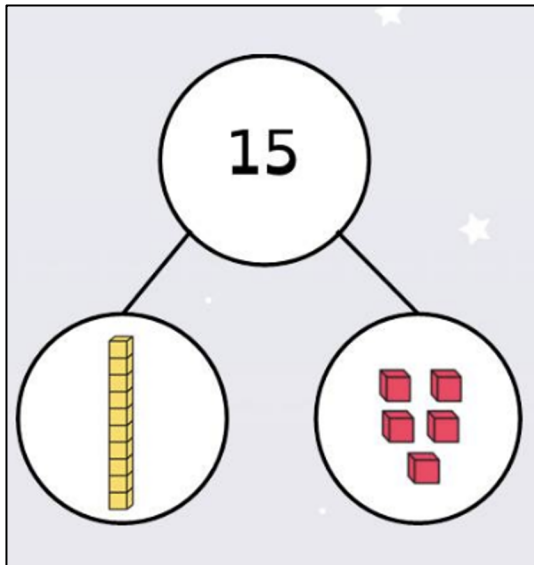
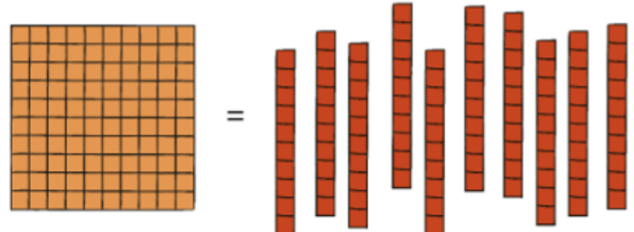


Stage 1 - Place Value

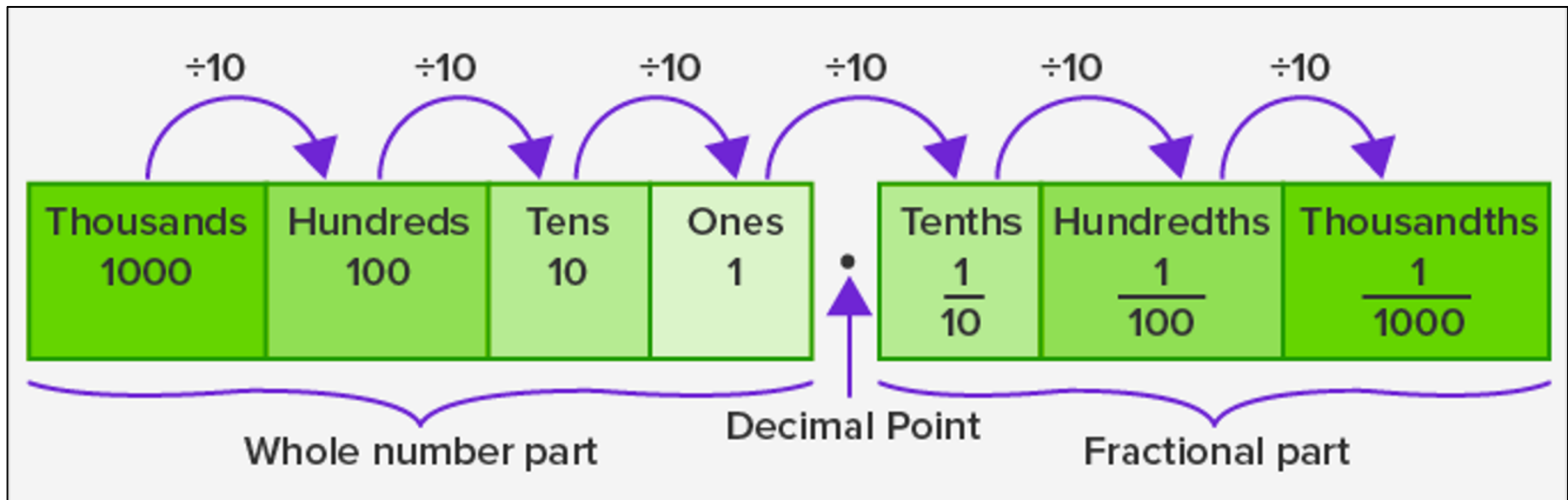
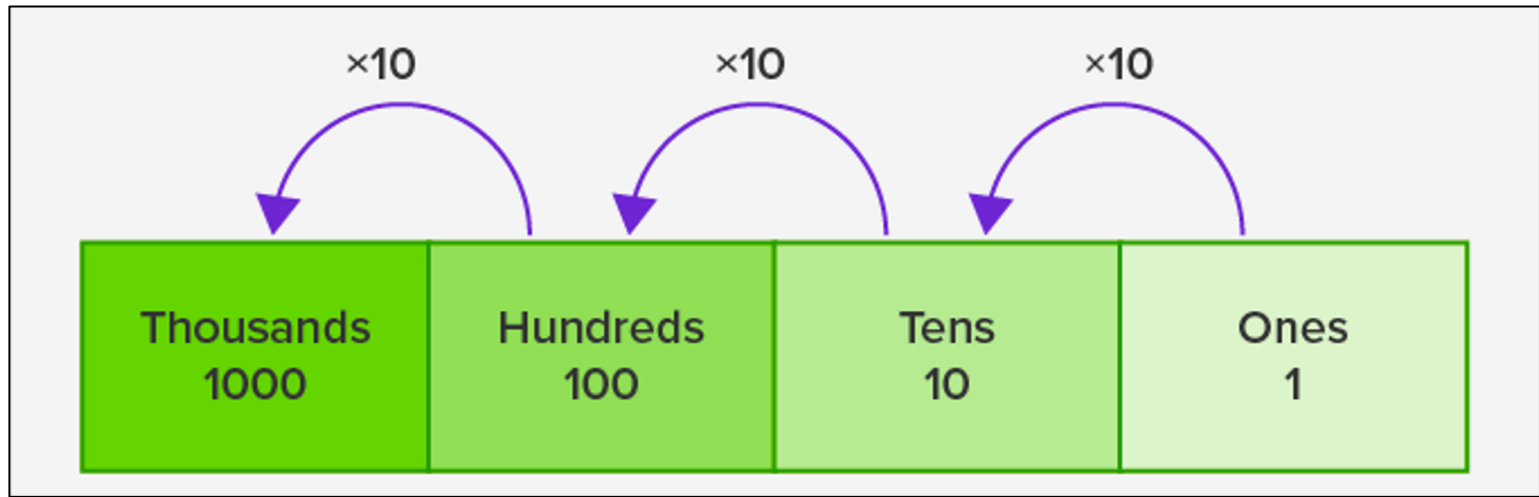
1 ten = 10 ones



1 hundred = 10 tens



Stage 2 and 3 - Multiplicative Place Value

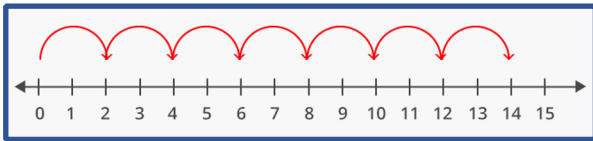


Stage 1/2 - Strategies for X and ÷

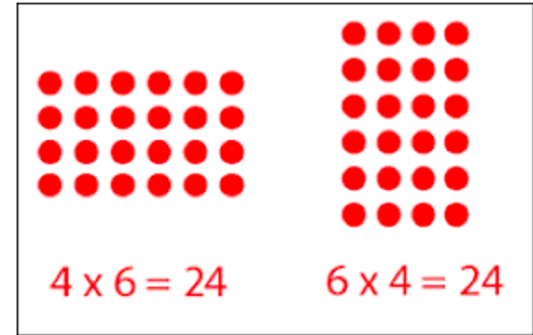
Skip counting
Arrays



Repeated add



$$2 + 2 + 2 + 2 + 2 = 10$$

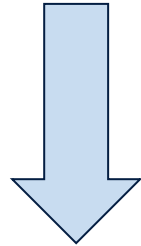


Deep Understanding

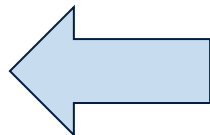
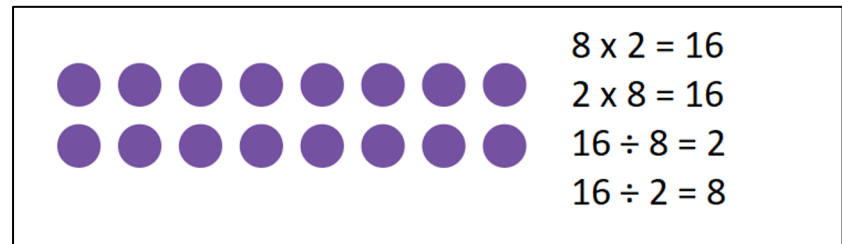
- 2 x - Double
- 4 x - Double Double
- 8 x - Double Double Double

- 3 x - Double and one more
- 6 x - Double the 3's

- 5 x - Relate to 10s
- 9 x - 10's facts, less one group

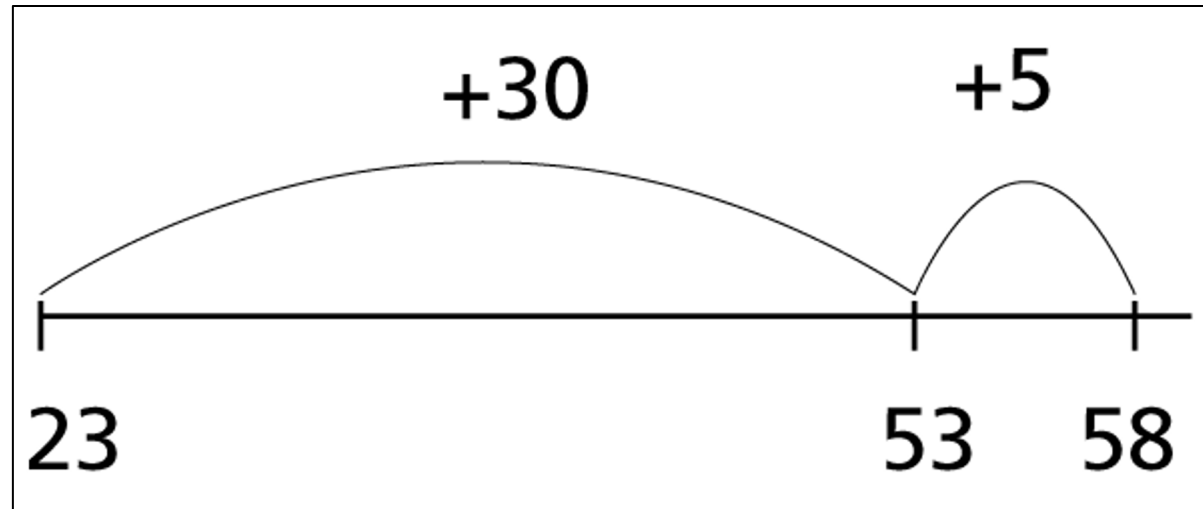


Inverse operations

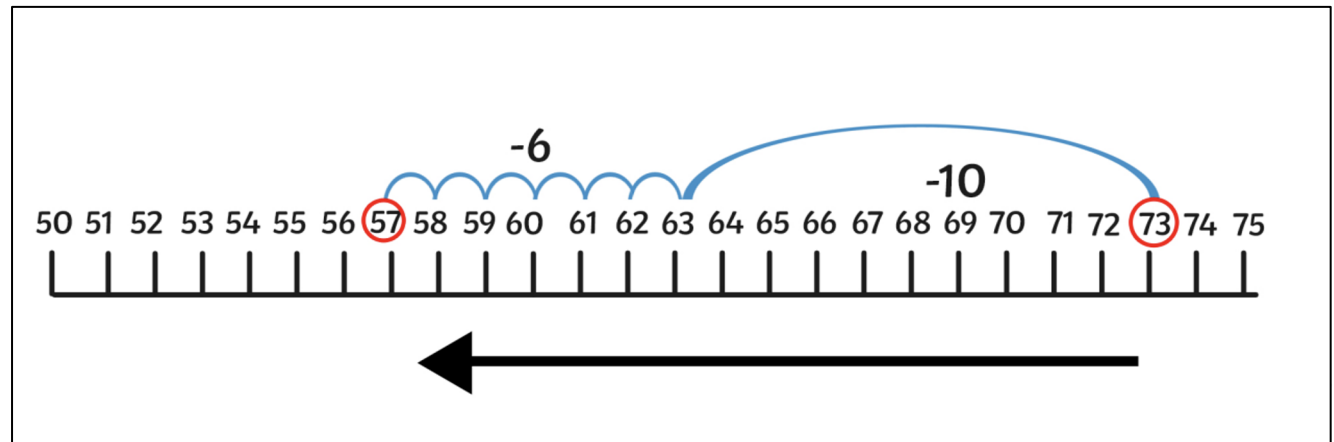


Stage 2 - The Jump Strategy

$$23 + 35 = 58$$



$$73 - 16 = 57$$

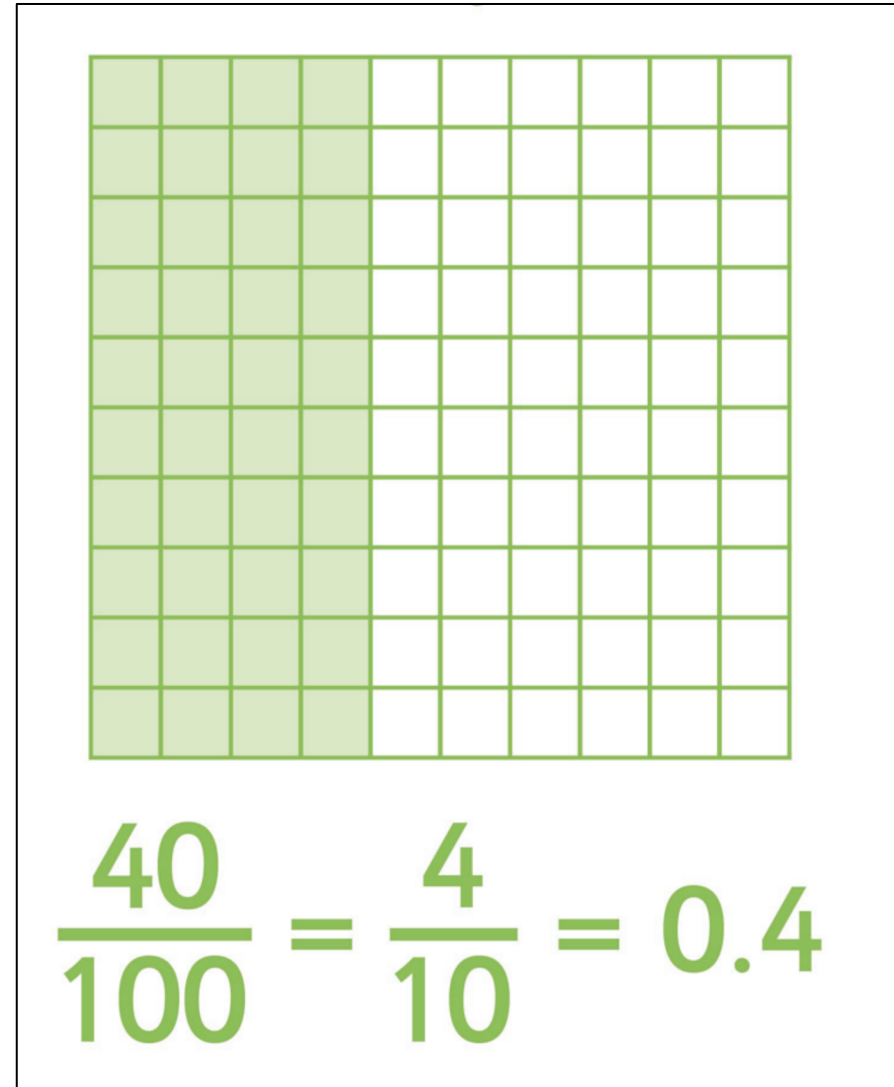
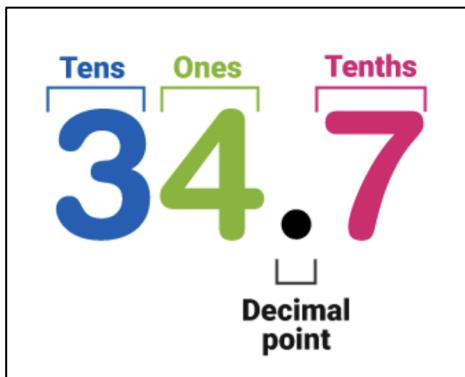
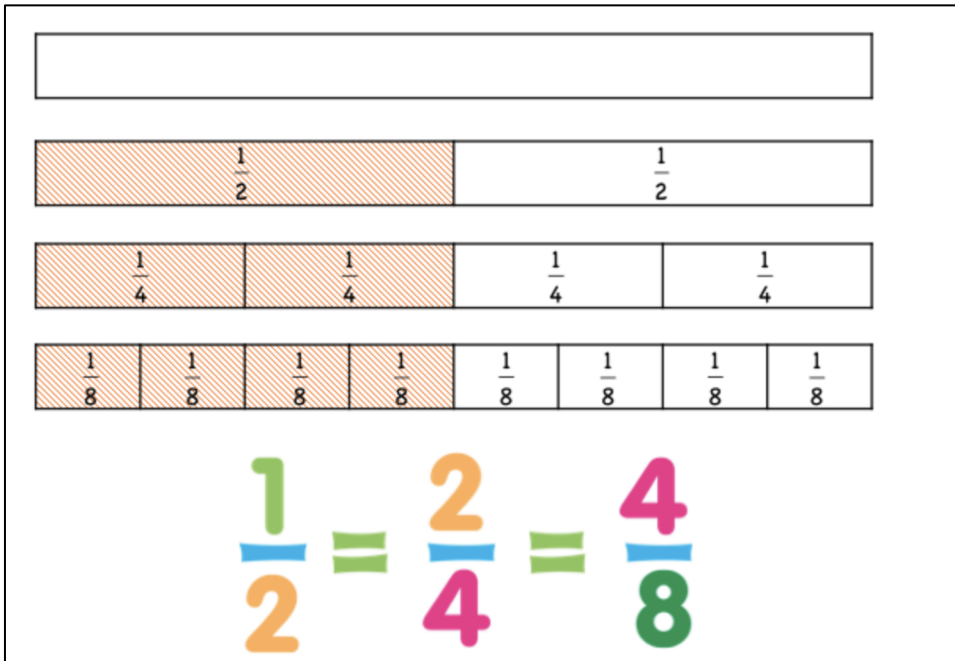


Stage 2 - The Split Strategy

$$\begin{aligned} \mathbf{23 + 35} &= (20 + 30) + (3 + 5) \\ &= 50 + 8 \\ &= 58 \end{aligned}$$

$$\begin{aligned} \mathbf{97 - 63} &= (90 - 60) + (7 - 3) \\ &= 30 + 4 \\ &= 34 \end{aligned}$$

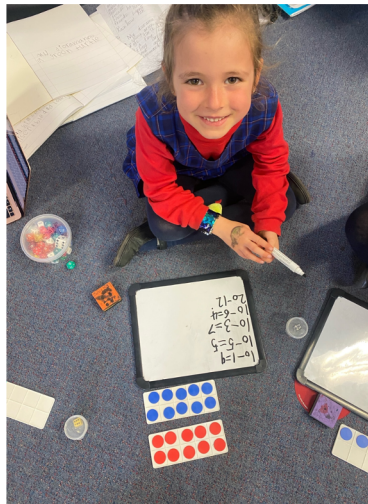
Stage 3 - Making connections between fractions, decimals and percentages



How can you support your child at home?

The Everyday Maths Hub

Maths A-to-Z



Time to Practise!

Choose 4 work stations to visit. You will get 6 mins at each station.

- Counting on
- Friends of 10
- Partitioning
- Place value
- Multiplication tables - using numbers flexibly
- The jump and split strategy
- Formal algorithm for addition
- Formal algorithm for subtraction
- Formal algorithm for multiplication
- Formal algorithm for division
- Fractions and Decimals
- Reading the time



Thank you for your participation

