

Maths Masterclass

Second Level – Fractions, Decimals and Percentages

Number Talks

Number Talks Hand Signals



I'm thinking.



I have an answer
and a strategy!



I agree.

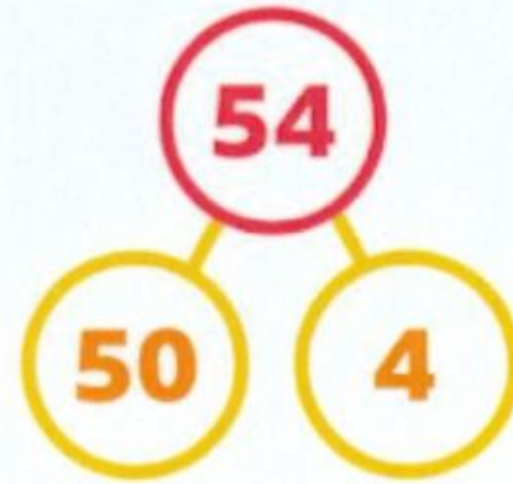


I have more
than one strategy.

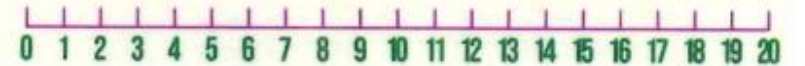


5 Key Mental Strategies

Partitioning



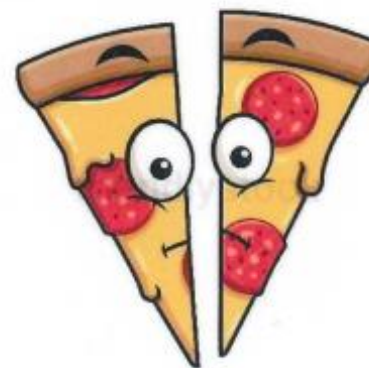
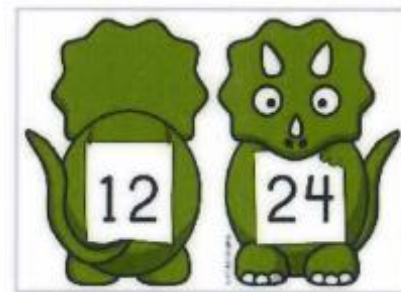
Counting on and back



Compliments to 10, 100



Doubling and Halving



Bridging



Fractions, Decimals and Percentages

– Second Level –Key Learning

- Fractions – order, compare, simplify and find fractions of numbers.
- Decimals – order, sequence, add, subtract.
- Percentages – find percentages of numbers.
- Link Fractions with decimals and with percentages.

Fractions:

numerator
(number of parts we have)

$\frac{2}{5}$

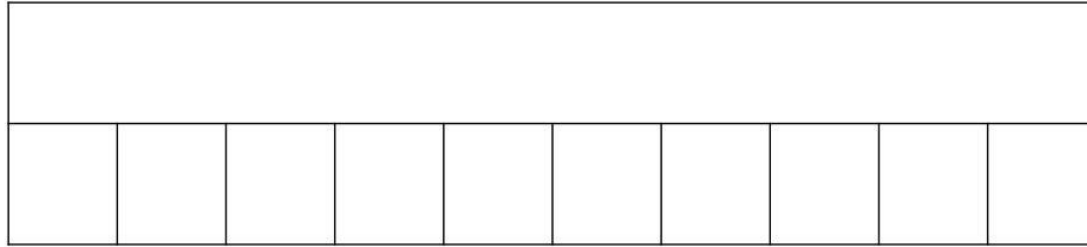
denominator
(total parts in whole)

1											
$\frac{1}{2}$						$\frac{1}{2}$					
$\frac{1}{3}$				$\frac{1}{3}$				$\frac{1}{3}$			
$\frac{1}{4}$			$\frac{1}{4}$			$\frac{1}{4}$			$\frac{1}{4}$		
$\frac{1}{5}$		$\frac{1}{5}$		$\frac{1}{5}$		$\frac{1}{5}$		$\frac{1}{5}$		$\frac{1}{5}$	
$\frac{1}{6}$		$\frac{1}{6}$		$\frac{1}{6}$		$\frac{1}{6}$		$\frac{1}{6}$		$\frac{1}{6}$	
$\frac{1}{7}$		$\frac{1}{7}$		$\frac{1}{7}$		$\frac{1}{7}$		$\frac{1}{7}$		$\frac{1}{7}$	
$\frac{1}{8}$		$\frac{1}{8}$		$\frac{1}{8}$		$\frac{1}{8}$		$\frac{1}{8}$		$\frac{1}{8}$	
$\frac{1}{9}$		$\frac{1}{9}$		$\frac{1}{9}$		$\frac{1}{9}$		$\frac{1}{9}$		$\frac{1}{9}$	
$\frac{1}{10}$		$\frac{1}{10}$		$\frac{1}{10}$		$\frac{1}{10}$		$\frac{1}{10}$		$\frac{1}{10}$	
$\frac{1}{11}$		$\frac{1}{11}$		$\frac{1}{11}$		$\frac{1}{11}$		$\frac{1}{11}$		$\frac{1}{11}$	
$\frac{1}{12}$		$\frac{1}{12}$		$\frac{1}{12}$		$\frac{1}{12}$		$\frac{1}{12}$		$\frac{1}{12}$	

Empty number lines to order, find fractions of a number. Links to tables.

Decimals:

Bar Modeling



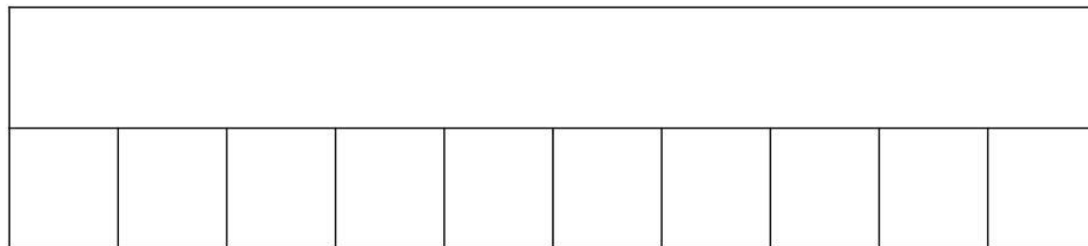
Number Model:

$$\underline{\hspace{2cm}} + \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$$

Empty number lines to order, 4 operations with decimals. Links to tables.

Percentages:

Bar Modeling



Number Model:

$$\underline{\hspace{2cm}} + \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$$

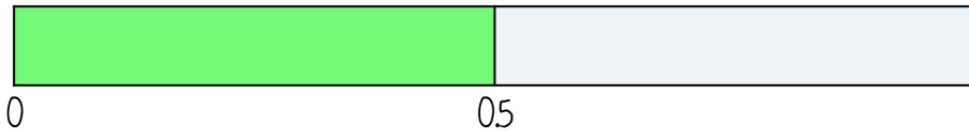
Empty number lines to order, find percentage of a number. [Links to tables.](#)

Linking the facts:

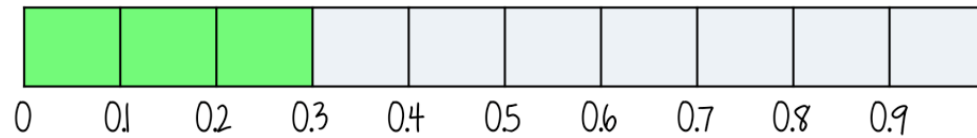
Fractions to decimals and vice versa

now students have an understanding of the decimal number line, they can put it onto a bar model to convert between fractions and decimals. draw the bar model fraction first then put on the decimal number line identifying the increments by dividing 1 by the denominator of the fraction

$$1/2 = 0.5$$



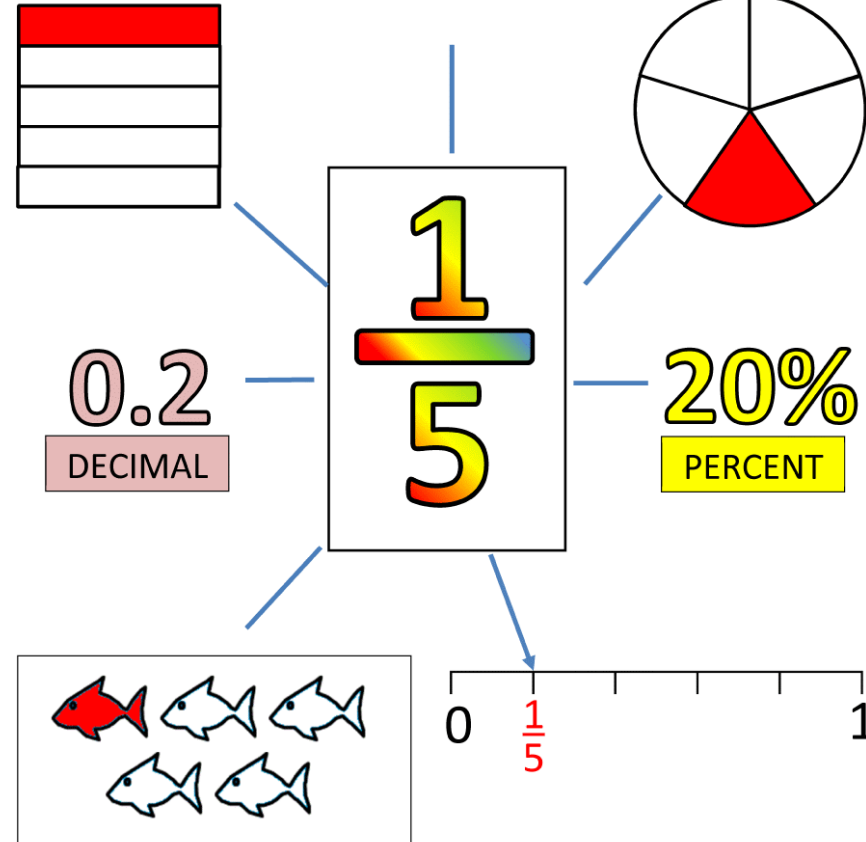
$$3/10 = 0.3$$



$$2/5 = 0.4$$



One-fifth



Useful websites

Match fractions, decimals and percentages

Fractions	Decimals	Percentages
$\frac{1}{10}$	0.1	10%
$\frac{1}{2}$	0.2	20%
	0.01	1%

Play game

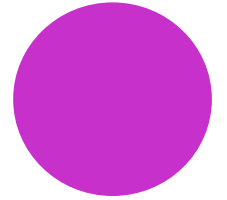
Playground percentages

11%

NEW SCHOOL SITE

Hi! My name is Terry and I'm your local town planner. A block of land has been set aside for a new school. You have been chosen to help design the school. Select **Next** to start.

Next
How to use
Design your own school



ITEMS GAINED: 000

TARGET: []

TIME: 060

SCORE: 0000

START

Homework
Support
Session

