https://teachers.thenational.academy/lessons/deriving-division-and-multiplication-facts-6nk62t

https://mathsbot.com/tools/placeValue

https://mathsframe.co.uk/en/resources/resource/120/match_fractions_decimals_and_percentages#.UCdcd2MsCEY

https://www.scootle.edu.au/ec/viewing/L133/index.html

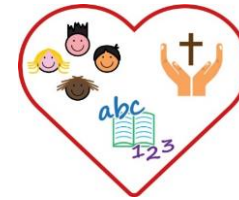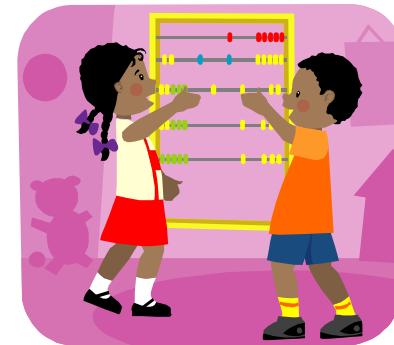https://www.mathplayground.com/Triplets/index.html

St Matthew's C.E. Primary Academy

Help your child to learn maths facts.
Year 6

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

'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.

<u>Spring Term 1 : Derive more complex multiplication and division facts building on tables facts – e.g., decimals and multiples of 10 etc</u>

Help children to link their times tables facts to larger numbers e.g.

If I know 5 x 3 = 15
    then 50 x 3 = 150
    and 5 x 30 = 150
    and 50 x 30 = 1500   All of these facts link to x 10 knowledge.

Extend this to knowledge of decimals e.g.
If I know 5 x 3 = 15
    then 0.5 x 3 = 1.5
    and 5 x 0.3 = 1.5   All of these facts link to ÷ 10 knowledge
If I know 8 x 7 = 56
    then 0.8 x 7 = 5.6
    and 8 x 0.7 = 5.6
    and 0.8 x 0.7 = 0.56   All of these facts link to ÷ 10 knowledge

<u>Practical ideas to help your child.</u>

It is really important that children are as confident with multiplication and division by 10 and 100, as this enables them to work with decimals.

Help your child to understand and remember the rules for x and ÷ by 10, 100 and 1000.

Rules:
When you multiply move the digits to the left, the number of zeros indicates how many places to move the digits e.g. x 10 move 1 place left, x 100 move 2 places left, x 1000 move 3 places left.
When you divide, move the digits to the right, the number of zeros indicates how many places to move the digits e.g. ÷ 10 move 1 place right, ÷ 100 move 2 places right, ÷ 1000 move 3 places right.

<u>Spring Term 2 :To know common decimals, percentages, and fraction equivalents.</u>

How do you find the equivalent fractions decimals and percentages?
- To convert a fraction to a decimal divide the numerator by the denominator.
- To convert a fraction to a percentage divide the numerator by the denominator and multiply by 100.
- To convert a decimal to a percentage multiply the decimal by 100.
- To convert a percentage to a decimal divide the percentage by 100.
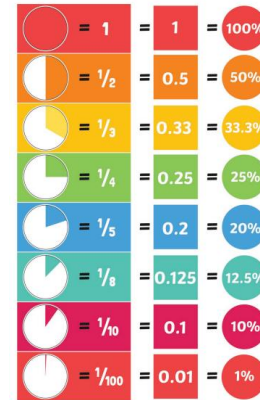
Percentage	Fraction	Hundred square	Number line
	$\frac{}{100}$		0% — 100%
	$\frac{10}{100}$		0% — 100%
	$\frac{}{100}$		45% / 0% — 100%
6%	$\frac{}{100}$		0% — 100%

Vocabulary
Convert   decimal   percentage   fraction   multiply   divide
Numerator   denominator   equivalent   per cent %   out of 100

<u>Practical ideas to help your child.</u>

Make jigsaw pieces/ pizza slices to match up P, D and F.

0.8   80%
$\frac{8}{10}$ four fifths
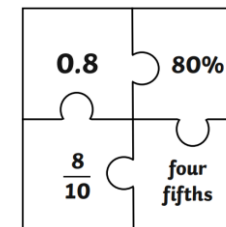
Work out a sale price e.g.10% off trainers or how much is left when for example 25% of the 500ml of orange juice had been drunk?