

# St Raphael's



Year 6

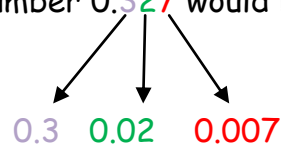
## 'Our Objectives'

A guide to what you should focus on when helping your child at home.'

## Read, write and order numbers with up to 3 decimal places

To order decimals the children need to know to look for the

The children will need to be able to break up (partition) a number using decimal place value. The number 0.327 would be partitioned as:



PLACE VALUE CHART

THOUSANDS	HUNDREDS	TENS	ONES	DECIMAL POINT	TENTHS	HUNDRETHS	THOUSANDTHS
				●			

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## Use tables to work with decimals

Your children should by now know their times tables, if this is not secure or they are not quick when recalling them then please encourage the use of:

[www.numbergym.co.uk](http://www.numbergym.co.uk)

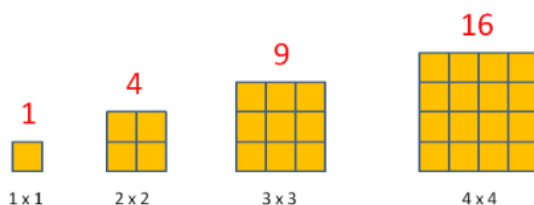
User name: straphaels

Password: millbrook

When these are secure they can use the facts to help with decimal calculations e.g.

from the fact  $6 \times 7 = 42$  you can work out that  $0.6 \times 7 = 4.2$

## Recall square numbers up to 12x12



A square number is the result of multiplying a number by itself.

## Add and subtract decimals to 3 decimal places.

Solve these problems. Remember, its always a good idea to estimate your answer first.

$$136.04 + 102.27 \rightarrow \begin{array}{r} 136.04 \\ +102.27 \\ \hline 238.31 \end{array}$$

Write in vertical column, aligning the decimal points.

Add each column, starting on right. Carry digits when needed.

$$2.37 - 0.031 \rightarrow \begin{array}{r} 2.370 \\ -0.031 \\ \hline 2.339 \end{array}$$

Write in vertical column, aligning the decimal points.

Subtract each column, starting on right and working left. Borrow as needed.

## Multiply 3 digit by 2 digit number

$$\begin{array}{r} \phantom{x} 374 \\ \times \phantom{0} 68 \\ \hline 2992 \\ \phantom{2} 22440 \\ \hline \phantom{2} 25432 \end{array}$$

First take the number in the units column (here it is 8) and multiply this by 374 starting with  $8 \times 4$  and working across to the hundreds column.

The second row (in green on the example) always has a zero in the units because we are multiplying from the tens column. Now we do the same thing and work across as before, this time multiplying the 6.

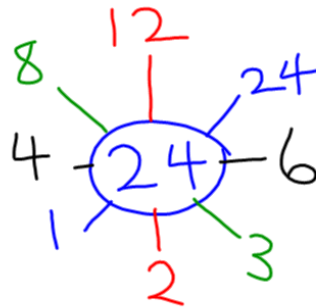
$$\begin{array}{r} \phantom{x} 374 \\ \times \phantom{0} 68 \\ \hline 2992 \\ \phantom{2} 22440 \\ \hline \phantom{2} 25432 \\ \phantom{2} 25432 \end{array}$$

This method takes practise to perfect and any opportunity to go over this with your child would benefit them greatly.

### Divide 3 digit by 2 digit number (using factors)

Factors are a great way of helping your child make a calculation more manageable, especially if they are finding multiplying or dividing by two digit numbers hard. A lot of questions like this in Year 6 involve numbers that you can find single digit factors of.

Example of factors: Factors are whole numbers that divide exactly into another number. For example, factors of 24 are shown below ( $24 \div 4 = 6$  therefore 4 and 6 are factors of 24.)



This skill needs practise but good times tables knowledge should mean that your child can spot factors. The reason this helps is for questions such as  $384 \div 24$ , this can now be done using box method simply by dividing 384 by 6 then that answer by 4. (You could have chosen other factors and still got to the answer of 16, ask your child to try this using 3 and then 8)

$$\begin{array}{r} 064 \\ 6 \overline{) 384} \end{array} \rightarrow \begin{array}{r} 16 \\ 4 \overline{) 64} \end{array}$$

answer = 16

## Fractions and percentages

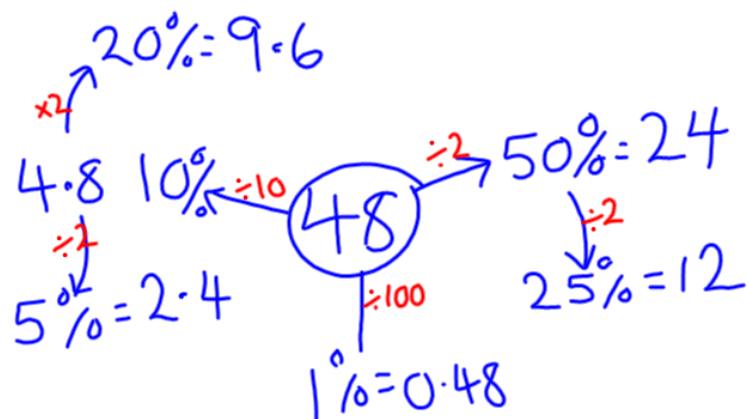
Secure times tables knowledge is so important when working with fractions. Being able to cancel a fraction down (or simplify) just requires them to be able to spot what times tables both numbers are in. For example  $\frac{14}{35}$  is a very uncommon fraction but both numbers are multiples of 7, when you divide both by 7 you get  $\frac{2}{5}$  which is easier for the children to order or compare to other fractions.



## Percentages of numbers

Finding percentages can be approached in lots of different ways. 50% is halving. 25% is half, then half again.

Finding other percentages can pose more problems though. To find 10% then the children just divide by 10. When you know 10% you can just multiply it to get other percentages such as 20% ( $10\% \times 2$ ) and 5% (half 10%). 1% of a number is also useful, the children just need to divide by 100.



This then can help find uncommon percentages such as 13% of a number. Here we would ask the children to divide by 10 to find 10% and jot that down. Then divide the original number by 100 to find 1%, multiply this by 3 to get 3%. The answer for 10% added to 3% gets you the 13%. It requires a few calculations and jottings make this manageable.