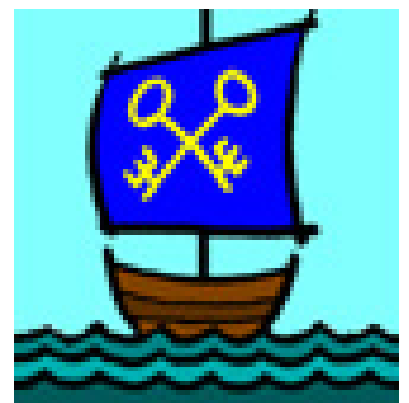




# Year Six

## Helping Your Child at Home

St Peter's Catholic  
Primary School



## By the end of Year 6, most children should be able to...

Read, write, order and compare numbers up to 10,000,000 and know value of each digit.

Multiply pairs of fractions, write the answer in its simplest form, divide fractions by whole numbers.

Convert units of measure from smaller to longer and vice versa. Solve measure problems with up to 3dp.

Be able to round any number to the degree of accuracy required.

Link fractions to division and calculate decimal fraction equivalent. Match simple fractions, decimals and percentages.

Be able to convert from kilometres to miles.

Solve problems that involve adding and subtracting negative numbers.

Multiply and divide numbers by 10, 100, and 1000. Know the value of each digit to three decimal places.

Recognise shapes with the same area can have different perimeters. Calculate the area of parallelograms / triangles.

In calculations, use both long and short methods of multiplication with numbers up to 4 digits.

When problem solving, round answers to that specified in the question.

Estimate, calculate and compare volume of 3D shapes.

Use a written method to divide numbers with up to four digits by a two-digit whole number, including remainders.

Multiply on-digit numbers with up to two decimal places by whole numbers. Use written division methods where the answer has two decimal places.

Draw 2D shapes when given dimensions and angles. Make nets, build and describe 3D shapes.

Perform mental calculations that include large numbers and mixed operations.

Solve simple problems involving ratio and proportion.

Classify shapes by properties. Recognise angles that meet at a point, are vertically opposite and find missing angles.

Recall the facts that allow you to identify factors, multiples and prime numbers.

Reduce ratios to the simplest form and use to show the relative sizes of two quantities.

Name parts of circles, including radius, diameter and circumference.

Solve multi-step problems by identifying steps that needed use brackets to determine order of operations.

Express unknown numbers using symbols/letters.

Describe positions on the full co-ordinate grid. Translate and reflect shapes, using all four quadrants.

Show that you can simplify, compare and order fractions including fractions more than 1.

Use simple formulae expressed in words. Know when to use the formulae for area and volumes of shapes.

Know how when to calculate the mean (or average) of a set of data.

Be able to add and subtract fractions with different denominators and mixed numbers.

Be able to generate and describe linear number sequences.

Draw and read line graphs and pie charts. Know when to use percentages to measure angles on pie charts.

## **About the Expectations**

These show the end of year expectations for an average Year 6 child. The box surrounding each expectation relates to the area of mathematics as shown below:

**NUMBER**

**RATIO AND PROPORTION**

**ALGEBRA**

**MEASUREMENT**

**GEOMETRY**

**STATISTICS**

## **Calculations**

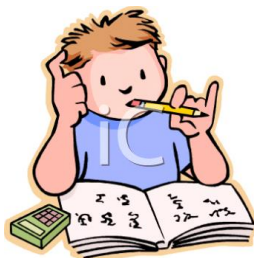
At St Peters we have devised a progression in calculation document for each of the four operations: addition, subtraction, multiplication and division.

The progression of written methods for each calculation for Year 6 is on the page that follows. These show what methods your child will be using in relation to their age. The methods used are typical of an average child in that year group. These are the methods that the children will be learning in class and using when calculating.

It is important to talk to your child and ask them to share the method they are using in school if you are unsure. Alternatively, discuss the methods that your child is using with their class teacher.

When faced with a calculation problem encourage your child to ask...

- ❖ Can I do this in my head?
- ❖ Could I do this in my head using drawing or jotting to help me?
- ❖ Do I need to use a written method?



Also help your child to estimate and check the answer. Encourage them to ask...

- ❖ Is the answer sensible?
- ❖ When solving a problem, have I put my answer into context?

# Year Six

## Addition

Compact column method to add several numbers of increasing complexity

$$\begin{array}{r} 82409 \\ + 20071 \\ \hline 7690 \\ + 4142 \\ \hline 114312 \\ \hline 114312 \\ \hline 11121 \end{array}$$

$$\begin{array}{r} 81059 \\ + 3668 \\ \hline 15301 \\ + 20551 \\ \hline 120579 \\ \hline 11111 \end{array}$$

Column method to add any decimal numbers with up to 3 decimal places

$$\begin{array}{r} 23.361 \\ + 9.080 \\ \hline 59.770 \\ + 1.300 \\ \hline 93.511 \\ \hline 212 \end{array}$$

$$\begin{array}{r} 26.381 \\ + 9.080 \\ \hline 4.770 \\ + 2.600 \\ \hline 42.831 \\ \hline 212 \end{array}$$

## Subtraction

Subtract with increasing large and more complex numbers

$$\begin{array}{r} 28'928 \\ - 2128 \\ \hline 28,928 \end{array}$$

$$\begin{array}{r} 9'878 \\ - 98689 \\ \hline 007109 \end{array}$$

Compact method with decimal numbers with up to 2 decimal places including in the context of money and measures

$$\begin{array}{r} 7'69'0 \\ - 372.5 \\ \hline 6796.5 \end{array}$$

$$\begin{array}{r} 9'638 \text{ kg} \\ - 47.09 \text{ kg} \\ \hline 159.328 \text{ kg} \end{array}$$

## Multiplication

Short multiplication 4-digit x 1-digit    Long Multiplication 4-digit x 2-digit

$$\begin{array}{r} 4562 \\ \times 31934 \\ \hline 3341 \end{array}$$

$$\begin{array}{r} 1324 \\ \times 7944 \\ \hline 13244 \\ + 132440 \\ \hline 21184 \end{array}$$

Multiply decimal numbers with up to 2 decimal places by a 1-digit number

$$\begin{array}{r} 4.29 \\ \times 8 \\ \hline 34.32 \\ \hline 327 \end{array}$$

## Division

Long Division (up to 4-digit number by a 2-digit number)

$$432 \div 15 = 28 \text{ r}12$$

$$\begin{array}{r} 15 \overline{)432} \\ \underline{300} \\ 132 \\ \underline{120} \\ 12 \end{array}$$

Short Division (up to 4-digit by a 2-digit number)

$$6497 \div 8 = 812.125$$

$$\begin{array}{r} 8 \overline{)6497.000} \\ \underline{0812.125} \\ 86497.000 \end{array}$$

Give remainders as fractions and decimals

# Useful Websites

Visit these useful websites to help your children to practice their maths skills in a fun and engaging way. These websites include different games and songs to support your child with their maths learning at home.

## **Times Table Rockstars**

A fun, interactive programme which allows children to rehearse their times tables

<https://trockstars.com/>



## **Numbots**

Play games to learn efficient mental calculation strategies to add and subtract two-digit numbers, so that you they can leave counting on your fingers behind!

<https://numbots.com>

## **Supermovers**

Videos, songs and even movement routines to help you learn about different areas of mathematics.

<https://www.bbc.co.uk/teach/supermovers/ks2-maths-collection/z7frpg8>



## **Percy Parker**

Sing and rap your way to learning all of your times tables with these ease using Percy Parker.

[www.youtube.com](http://www.youtube.com)

search for "Percy Parker times tables"