# ST PATRICK'S CATHOLIC PRIMARY SCHOOL

## HOW TO MULTIPLY

This short booklet will outline the formal method we use at St Patrick's for teaching multiplication. It will allow you to practise this method with your child at home in the full confidence that your input will compliment and reinforce the work we already do.

# How to Multiply

1. Place your numbers above one another ensuring that they are all in the correct columns. Remember the large number needs to be first and at the top.

**Example**

23 x 3

$$\begin{array}{r} 23 \\ \times \quad 3 \\ \hline \end{array}$$

2. Start with the units-column and then multiply the top number (3) by the bottom number (3) and write the answer in the units-column

**Example**

$$\begin{array}{r} {\scriptstyle 3 \times 3} \\ 23 \\ \times \quad 3 \\ \hline 9 \end{array}$$

3. Move onto the tens-column and do the same. So 2 (tens) multiplied by 3 (units, still at the bottom). If there are other columns, like hundreds and thousands, do the same again.

**Example**

$$\begin{array}{r} {\scriptstyle 2 \times 3} \\ 23 \\ \times \quad 3 \\ \hline 69 \end{array}$$

# How to Multiply

4. In this sum there is a problem.

**Example**

24 x 3   ➡️   $\begin{array}{r} 24 \\ \times\ 3 \\ \hline \end{array}$   ➡️   $\begin{array}{r} 24 \\ \times\ 3 \\ \hline \end{array}$

4 x 3 gives me 12 and there is only space for one number in the units-column.

The solution is to place the 2 of 12 in the units-column and move the 1 of 12 under the tens-column as shown in the example below. This is known as 'carrying'.

**Example**

$$\begin{array}{r} 24 \\ \times_1\ 3 \\ \hline 2 \\ 12 \end{array}$$

Notice how the 1, when I move it under the tens-column it is a bit smaller, this is so I know it has been carried and I don't get it mixed up with the rest of the sum.

# How to Multiply

6. Now carry on with the next part of the sum which is the unit on the bottom (3) multiplied by the tens-column on top (2).  The answer is 6, but you must then add on the 1 that you have carried to give you 7

**Example**

$$2 \times 3$$

$$\begin{array}{r} 24 \\ \times_1 3 \\ \hline 2 \end{array}$$

$$\begin{array}{r} 24 \\ \times_1 3 \\ \hline \phantom{0}2 \\ 6 + 1 = 7 \end{array}$$

**Example**

$$\begin{array}{r} 24 \\ \times_1 3 \\ \hline 72 \end{array}$$

A small tip that will help you when you do longer sums is try to cross the number that you carry off when you add it on. It will stop you forgetting to add it.

# How to Multiply

7. This sum gives you a problem.

**Exam**

42 x 3

$$\begin{array}{r} 2 \\ 4\overset{\downarrow}{2} \\ \times\ 3 \\ \hline 6 \end{array}$$

$$\begin{array}{r} 3 \\ 4\overset{\downarrow}{2} \\ \times\ 3 \\ \hline 6 \end{array}$$

3 x 4 gives you 12. However, you only have one column left – the tens-column.

In this case, when it is the final column, you place the unit-digit down as normal (2), but then rather than carry, you just the place the ten-digit (1) in the next column up – the hundreds.

**Example**

$$\begin{array}{r} 42 \\ \times\ 3 \\ \hline 26 \end{array}$$

12

$$\begin{array}{r} 42 \\ \times\ 3 \\ \hline 126 \end{array}$$

12

Think you've mastered it? Then try The Big 10.

# THE BIG 10

Can you get The Big 10?
1. 23 x 3
2. 43 x 2
3. 25 x 2
4. 15 x 3
5. 42 x 4
6. 54 x 3
7. 52 x 5
8. 123 x 3
9. 234 x 4
10. 455 x 5