Maths Booklet

Multiplication

Beeches

The aim of this booklet is to outline what is expected by the end of the year. We have included some of the strategies that will be used in class so that support is given in the same way.

We have included some activities that can be done at home to help them develop fluency and understanding.

Multiplication Expected targets.

- multiply numbers up to 4 digits by a one- or two-digit number using a formal written method, including long multiplication for two-digit numbers
- multiply and divide numbers mentally drawing upon known facts
- multiply and divide whole numbers and those involving decimals by 10, 100 and 1000

Can you learn all of your times tables and related division facts and get your name on the Maths Elf's Roll of Honour?

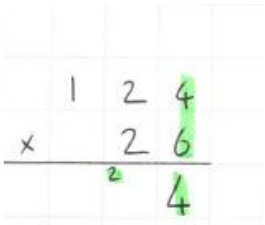
Here is the formal method which children need to know for multiplying 4 digit numbers by a one- or two-digit number.

124 × 26 becomes

$$\begin{array}{r} {\scriptstyle 1\ \ 2} \\ 1\,2\,4 \\ \times\ \ 2\,6 \\ \hline 7\,4\,4 \\ 2\,4\,8\,0 \\ \hline 3\,2\,2\,4 \\ \hline {\scriptstyle 1\ \ 1} \end{array}$$

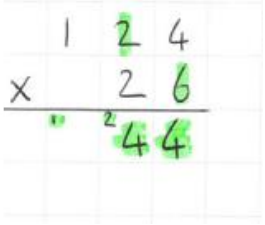
Answer: 3224

Below is a step by step method.

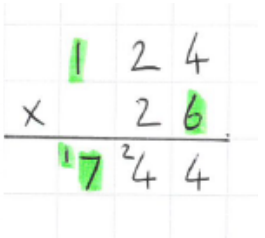


First, multiply 124 by 6

Six times four ones is twenty-four.



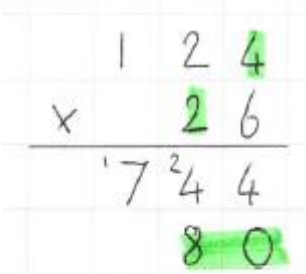
Six times twenty is one hundred and twenty. Add the twenty from the previous step to get one hundred and forty.



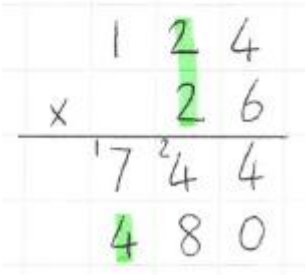
Six times one hundred is six hundred. Add the one hundred from the previous step to get seven hundred.

One hundred and twenty four times six is seven hundred and forty four.

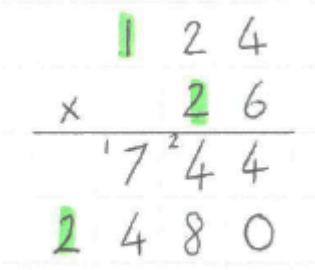
Next, multiply 124 by 20 (see next page)



Twenty times four is eighty.



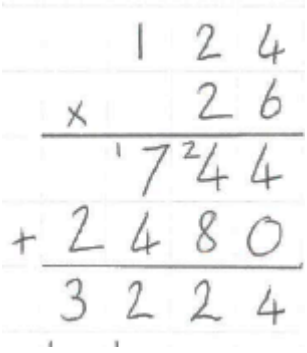
Twenty times twenty is four hundred.



Twenty times one hundred is two thousand.

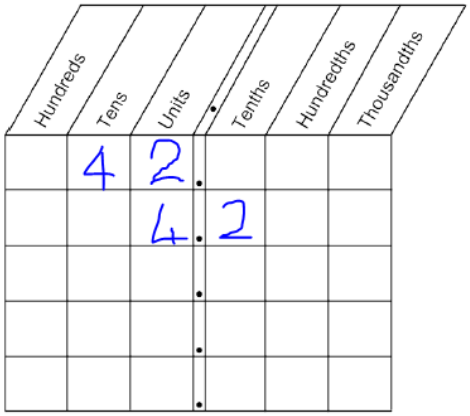
One hundred and twenty-four times twenty is two thousand, four hundred and eighty.

<u>Finally, add both parts together</u>



One hundred and twenty-four times twenty-six is three thousand, two hundred and twenty-four.

When multiplying and dividing by 10, 100, 1000, children need to be encouraged to think about numbers sliding left and right through the place value columns:



Here is a model of 42 ÷ 10. We describe it as follows:

"The forty (four tens) has slid one place to the left into the units column. The two units have slid one place to the left into the tenths column."

This is particularly important in this example:

35.3 x 10

If we rely on the trick of "add a zero" this will produce the wrong answer.

A context here would be converting the price per litre on a petrol pump into pounds and pence for 10 litres.

Mental calculations continue to be important. This is an easy skill to practice.

Multiplication tables knowledge is essential. Children will need to have instant recall to 12 x 12 so that they can solve more complicated problems involving fractions and ratio. These are the parts of mathematics that children tend to find the most difficult, so please do spend time at home learning them.

The following websites are all good:

http://www.mad4maths.com/multiplication_table_math_games/

http://www.interactivestuff.org/match/maker.phtml?id=5

https://www.cgpbooks.co.uk/interactive_ks2_maths_sevenTimesTable

http://www.arcademics.com/games/meteor/meteor.html

http://www.resourceroom.net/math/eightetal.htm

http://www.ictgames.com/spitfireufo.html

http://www.ictgames.com/multiBounce/

http://www.learnyourtables.co.uk/en/index2.htm

For a small charge, the squeebles app can be purchased for iPad or android tablets. This has been shown in school to be highly effective for learning tables.