Multiplying Using Paper and Pencil

When using the pencil and paper method to multiply two numbers, follow these steps.

1. Place the numbers so that one number is above the other and the numbers in the ones place are aligned.

Example

$$\begin{array}{r} 125 \\ \times\ 34 \\ \hline \end{array}$$

– Multiplicand
– Multiplier

2. Multiply the digit in the ones place of the multiplier by the digit in the ones place of the multiplicand.

4 × 5 = **20**
The answer is 20.
Each place value can have only one digit so the **0** in the ones place is placed under the ones place in the answer.

$$\begin{array}{r} {\scriptstyle 2\ \ \ } \\ 125 \\ \times\ 34 \\ \hline 0 \end{array}$$

2 from 20 is carried over to become part of the value of the next place.

3. Multiply the digit in the ones place of the multiplier by the digit in the tens place of the multiplicand. ADD the value of any carried digits to this total.

4 × 2 = **8,** + 2 = **10**

4 multiplied by 2 equals 8. Add the carried 2 to 8, and the answer is 10.

$$\begin{array}{r} {\scriptstyle 1\ \ \ } \\ 125 \\ \times\ 34 \\ \hline 00 \end{array}$$

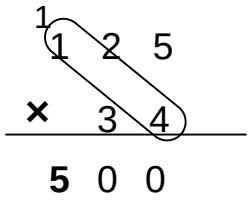
1 from 10 is carried over to the hundreds place.

0 is written below the tens place.

4. Multiply the digit in the ones place of the multiplier by the digit in the hundreds place of the multiplicand. ADD the value of any carried digits to this total.

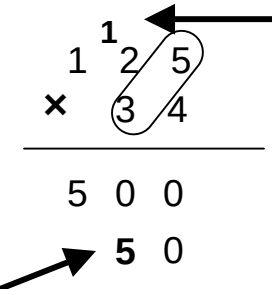
$4 \times 1 = 4, + 1 = 5$

4 multiplied by 1 equals 4. Then add the carried 1 to 4, and the answer is 5.



5. Multiply the digit in the tens place of the multiplier by the digit in the ones place of the multiplicand.

1 from 15 is carried over to become part of the value of the next place.



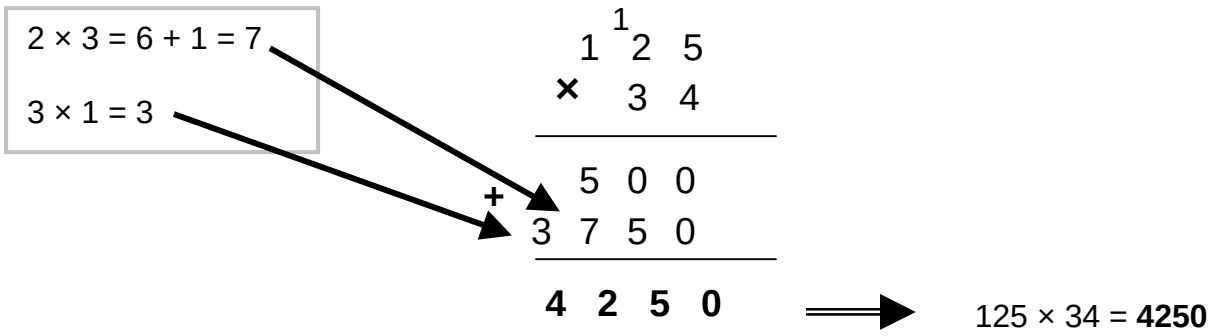
$3 \times 5 =$ **15**

Each place can only have one digit. 5 is placed under the tens place.

To show that the tens place of the multiplier is being multiplied, a zero is placed in the ones position to hold the place value.

6. Repeat steps 3 and 4 using the figure in the tens place of the multiplier.

7. Add the results together to get the final answer.



Multiplication can be expressed in numeric and word forms.

Numeric form: 125 × 34 = 4250

Word form: One hundred twenty-five *times* thirty-four *equals* four thousand two hundred fifty.