

**Multiplying By 1111**

A. Multiplying by 1111 is very similar to [multiplying by 111](#) except you will be adding 4 digits at a time instead of 3. See the examples below for an illustration:

Ex [1]  $3414 \times 1111 =$

a) Write down 4.

$$\begin{array}{r} \phantom{3} \phantom{4} \phantom{1} \overbrace{4}^4 \\ 3 \ 4 \ 1 \ 4 \end{array}$$

b)  $4 + 1 = 5$ . Write down 5.

$$\begin{array}{r} \phantom{3} \phantom{4} \overbrace{1 \ 4}^5 \\ 3 \ 4 \ 1 \ 4 \end{array}$$

c)  $4 + 1 + 4 = 9$ . Write down 9.

$$\begin{array}{r} \phantom{3} \overbrace{4 \ 1 \ 4}^9 \\ 3 \ 4 \ 1 \ 4 \end{array}$$

d)  $4 + 1 + 4 + 3 = 12$ . Write down 2, carry \*1.

$$\begin{array}{r} \overbrace{3 \ 4 \ 1 \ 4}^{12} \\ 3 \ 4 \ 1 \ 4 \end{array}$$

e)  $1 + 4 + 3 = 8 + *1 = 9$ . Write down 9.

$$\begin{array}{r} \overbrace{3 \ 4 \ 1 \ 4}^{8+*1} \\ 3 \ 4 \ 1 \ 4 \end{array}$$

f)  $4 + 3 = 7$ . Write down 7.

$$\begin{array}{r} \overbrace{3 \ 4 \ 1 \ 4}^7 \\ 3 \ 4 \ 1 \ 4 \end{array}$$

g) Write down 3.

$$\begin{array}{r} \overbrace{3 \ 4 \ 1 \ 4}^3 \\ 3 \ 4 \ 1 \ 4 \end{array}$$

h) The answer is 3792954.

Ex [2]  $124 \times 1111 = \underline{\hspace{2cm}}$ .

- a) First, since we have to add 4 digits at least once you should treat this number as 0124.
- b) Write down 4.
- c)  $4 + 2 = 6$ . Write down 6.
- d)  $4 + 2 + 1 = 7$ . Write down 7.
- e)  $4 + 2 + 1 + 0 = 7$ . Write down 7.
- f)  $2 + 1 = 3$ . Write down 3.
- g) Write down 1.
- h) The answer is 137764.