

Long Multiplication

Example

Step 1 multiply

ones number
from bottom
number by first

$$\begin{array}{r} 11 \\ \times 11 \\ \hline 11 \\ + 11 \\ \hline 121 \end{array}$$

* remember to move the next row over one column

the ones column
from the top number.

Then multiply by the
tens column from the top
number, and so on.

Step 2 repeat steps with
each column from the bottom #.

Step 3 add all of the results

Carrying tens

Example:

$$\begin{array}{r} \textcircled{1} \\ 32 \\ * 28 \\ \hline 256 \\ + 64 \\ \hline 896 \end{array}$$

8x2 is 16,
so record 6,
and carry the
1; then, when
you multiply
8x3=24
add result to
the carried 1

Carry in the plus column

Example:

$$\begin{array}{r} \textcircled{1} \\ 74 \\ * 23 \\ \hline \textcircled{+} 222 \\ + 148 \\ \hline 1,702 \end{array}$$

* here we added $2+8$; we record the zero and carry the 1 to the next column




ltiplication - Microsoft Internet Explorer

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ss http://www.mathsteacher.com.au/year7/ch01_whole/04_mult/mult.htm

gle long multiplication Search 11 blocked Check AutoLink AutoFill Options

  		2	3	4	5	6	7	8	9	10
1	1	2	3	4	5	6	7	8	9	10
2	2	4	6	8	10	12	14	16	18	20
3	3	6	9	12	15	18	21	24	27	30
4	4	8	12	16	20	24	28	32	36	40
5	5	10	15	20	25	30	35	40	45	50
6	6	12	18	24	30	36	42	48	54	60
7	7	14	21	28	35	42	49	56	63	70
8	8	16	24	32	40	48	56	64	72	80
9	9	18	27	36	45	54	63	72	81	90
10	10	20	30	40	50	60	70	80	90	100

Times table

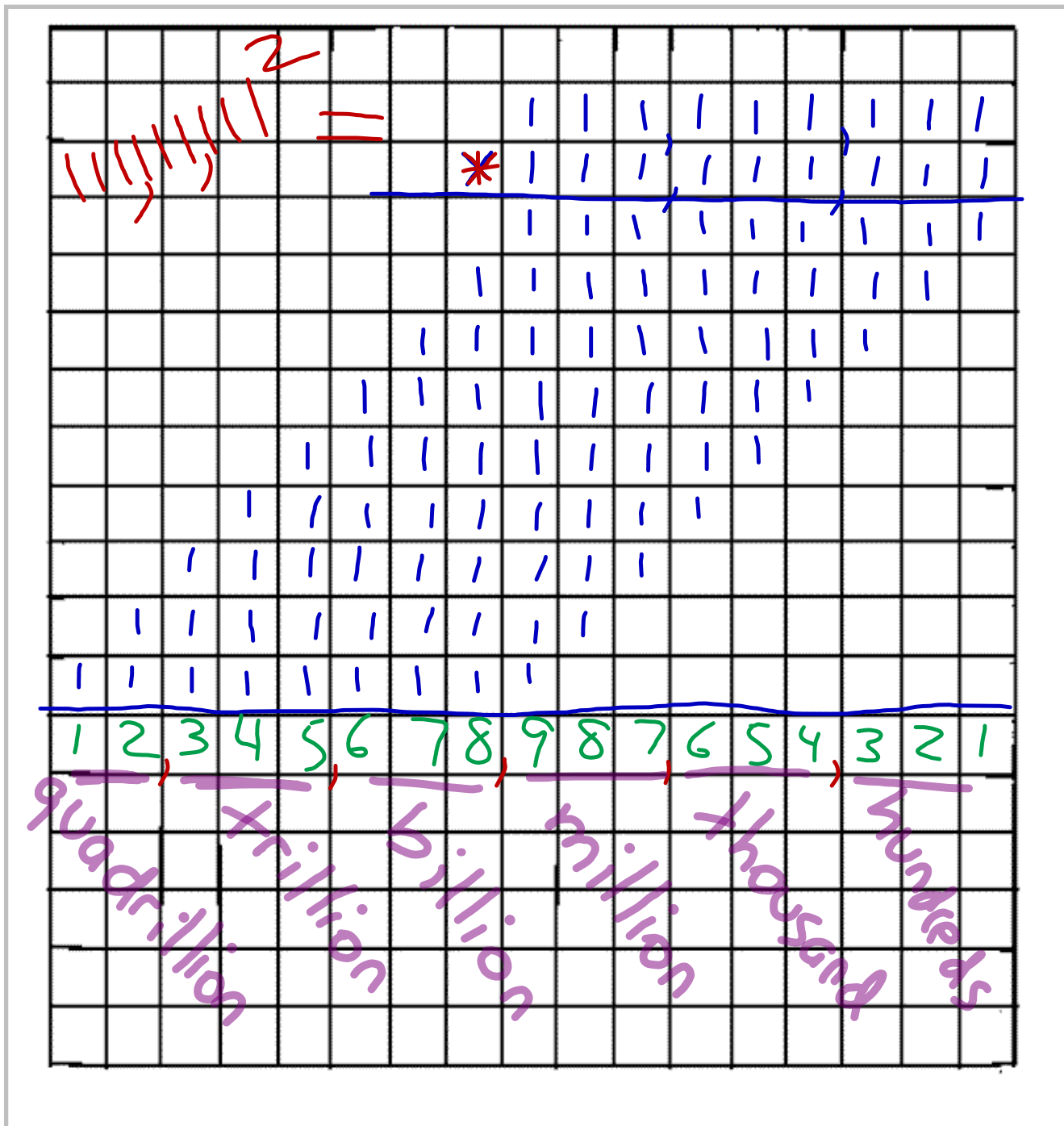
my multiplication
x 10

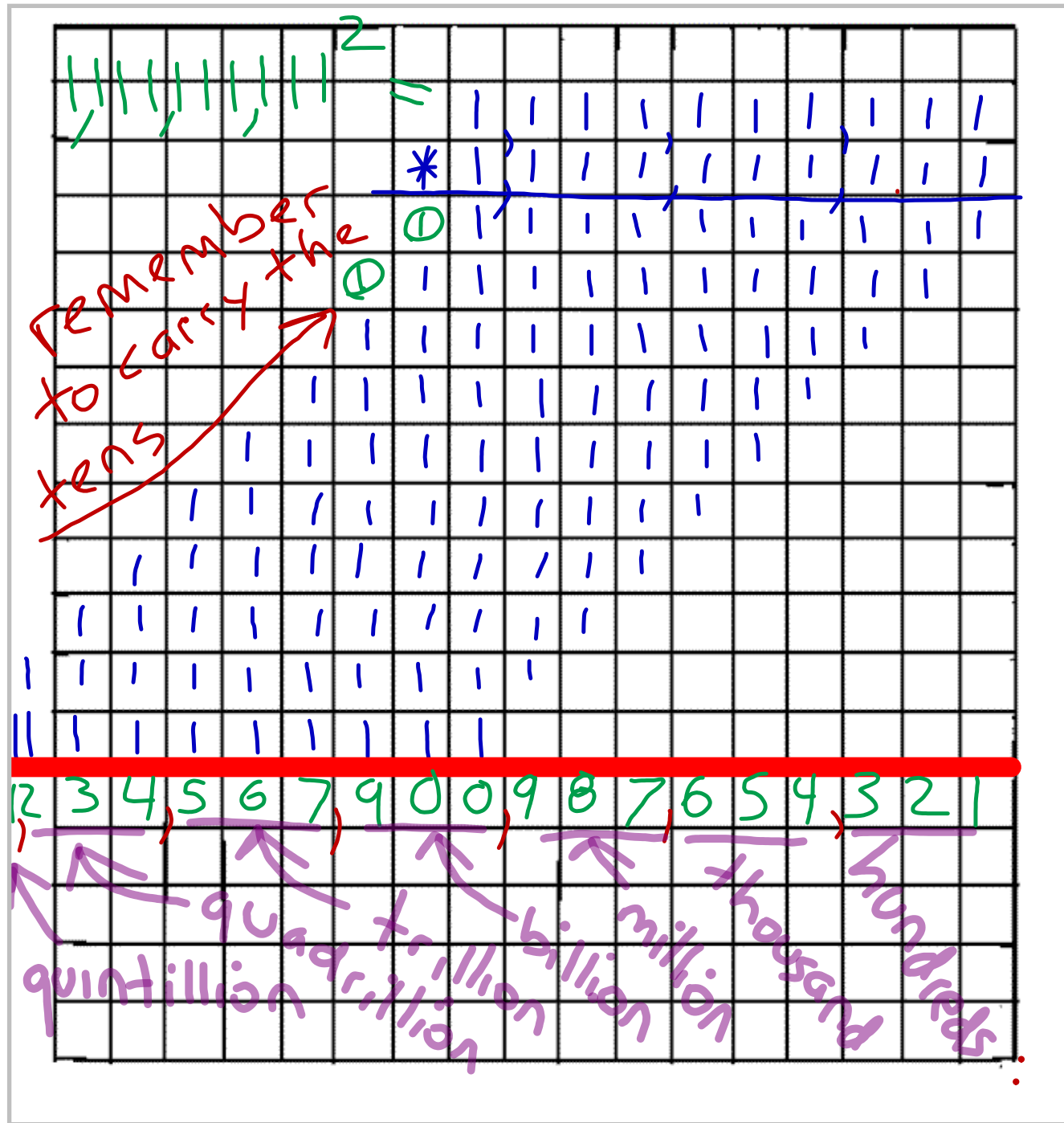
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Practice

$$\begin{array}{r} 22,222 \\ \times 22,222 \\ \hline \end{array}$$

Practice (key)

$$\begin{array}{r} 22,222 \\ \times 22,222 \\ \hline \textcircled{2} 44444 \\ \textcircled{1} 44444 \\ \textcircled{1} 44444 \\ \textcircled{1} 44444 \\ 44444 \\ 44444 \\ \hline 493,817,284 \end{array}$$

Practice

$$\begin{array}{r} 333,333 \\ * 333,333 \\ \hline \end{array}$$

Practice

$$\begin{array}{r} 333,333 \\ \times 333,333 \\ \hline \textcircled{5}999999 \\ \textcircled{4}99999- \\ \textcircled{3}99999- \\ \textcircled{2}99999- \\ \textcircled{1}99999- \\ 999999- \\ \hline 111,110,888,889 \end{array}$$

Practice

$$\begin{array}{r} 4444444 \\ * 4444444 \\ \hline \end{array}$$

Practice (key)

$$\begin{array}{r}
 \textcircled{1} \textcircled{1} \textcircled{1} \textcircled{1} \textcircled{1} \textcircled{1} \\
 4444444 \\
 * 4444444 \\
 \hline
 \textcircled{4} \textcircled{5} \textcircled{4} \textcircled{3} \textcircled{2} \textcircled{2} \textcircled{1} \\
 1777776 \\
 \textcircled{4} 1777776 - \\
 \textcircled{3} 1777776 - - \\
 \textcircled{2} 1777776 - - - \\
 \textcircled{1} 1777776 - - - - \\
 + 1777776 - - - - - \\
 1777776 - - - - - \\
 \hline
 19,753,082,469,136
 \end{array}$$

Practice

$$\begin{array}{r} 666 \\ *666 \\ \hline \end{array}$$

Practice

(key)

$$\begin{array}{r}
 \text{+} \begin{array}{r} \textcircled{1} \\ 3 \end{array} \begin{array}{r} \textcircled{2} \\ 9 \end{array} \begin{array}{r} \textcircled{2} \\ 9 \end{array} \begin{array}{r} \textcircled{2} \\ 9 \end{array} \begin{array}{r} \textcircled{2} \\ 6 \end{array} \\
 \hline
 4 \ 4 \ 3,5 \ 56
 \end{array}$$

$$\begin{array}{r}
 \begin{array}{r} \textcircled{2} \\ 3 \end{array} \begin{array}{r} \textcircled{1} \\ 9 \end{array} \begin{array}{r} \textcircled{2} \\ 9 \end{array} \begin{array}{r} \textcircled{2} \\ 9 \end{array} \begin{array}{r} \textcircled{2} \\ 6 \end{array} \\
 \hline
 \begin{array}{r} * \\ 6 \end{array} \begin{array}{r} * \\ 6 \end{array} \begin{array}{r} * \\ 6 \end{array}
 \end{array}$$

$\begin{array}{cc} \textcircled{3} & \textcircled{3} \\ \textcircled{3} & \textcircled{3} \\ \textcircled{3} & \textcircled{3} \\ 6 & 6 & 6 \end{array}$

these represent the carried 10s column for each product

* when you multiply 2 #'s, you get a product