



More Than One Digit

To solve multiplication problems using the traditional method it's a lot like addition.

You multiply, carry (if you need to) and repeat going from right to left for each number. Then you add your two answers together.

Lets take a look at the steps in depth below to solve the problem:

$907 \times 32 = \underline{\hspace{2cm}}$

$$\begin{array}{r} 1 \\ 907 \\ \times 32 \\ \hline 1814 \end{array}$$

$$\begin{array}{r} 1 \\ 907 \\ \times 32 \\ \hline 14 \end{array}$$

$$\begin{array}{r} 1 \\ 907 \\ \times 32 \\ \hline 1,814 \end{array}$$

$$\begin{array}{r} 1 \\ 907 \\ \times 32 \\ \hline 1,814 \\ 0 \end{array}$$

<p>1) Ones place × Ones place.</p> <p>A. $2 \times 7 = 14$</p> <p>B. Place the 4 in the ones column and carry the 1 to the tens column over the 0.</p>	<p>2) Ones place × Tens place.</p> <p>A. $2 \times 0 = 0$</p> <p>B. Add the 1 you carried in step 1.</p> <p>C. $0 + 1 = 1$</p> <p>D. Place the 1 in the tens column.</p>	<p>3) Ones place × hundreds place.</p> <p>A. $2 \times 9 = 18$</p> <p>B. Place the 8 in the hundreds column and the 1 in the thousands column.</p>	<p>4) Place 0.</p> <p>A. Place a 0 in the ones column. This is because now we're multiplying everything time 30.</p>
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$$\begin{array}{r} 2 \\ 907 \\ \times 32 \\ \hline 1,814 \\ 10 \end{array}$$

$$\begin{array}{r} 2 \\ 907 \\ \times 32 \\ \hline 1,814 \\ 210 \end{array}$$

$$\begin{array}{r} 2 \\ 907 \\ \times 32 \\ \hline 1,814 \\ 27,210 \end{array}$$

$$\begin{array}{r} 2 \\ 907 \\ \times 32 \\ \hline 1,814 \\ + 27,210 \end{array}$$

<p>5) Tens place × Ones place.</p> <p>A. $3 \times 7 = 21$</p> <p>B. Place the 1 in the tens column and carry the 2 over the 0.</p>	<p>6) Tens place × Tens place.</p> <p>A. $3 \times 0 = 0$</p> <p>B. Add the 2 you carried in step 5.</p> <p>C. $0 + 2 = 2$</p> <p>D. Place the 2 in the hundreds column.</p>	<p>7) Tens place × hundreds place.</p> <p>A. $3 \times 9 = 27$</p> <p>B. Place the 7 in the thousands column and the 2 in the ten thousands column.</p>	<p>8) Get ready to add.</p> <p>A. Set the problem up so that you can add your two answers together.</p>
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$$\begin{array}{r} 2 \\ 907 \\ \times 32 \\ \hline 1,814 \\ + 27,210 \\ \hline 4 \end{array}$$

$$\begin{array}{r} 2 \\ 907 \\ \times 32 \\ \hline 1,814 \\ + 27,210 \\ \hline 24 \end{array}$$

$$\begin{array}{r} 2 \\ 907 \\ \times 32 \\ \hline 1,814 \\ + 27,210 \\ \hline 024 \end{array}$$

$$\begin{array}{r} 2 \\ 907 \\ \times 32 \\ \hline 1,814 \\ + 27,210 \\ \hline 9024 \end{array}$$

$$\begin{array}{r} 2 \\ 907 \\ \times 32 \\ \hline 1,814 \\ + 27,210 \\ \hline 29024 \end{array}$$

<p>9) Add ones.</p> <p>A. $4 + 0 = 4$</p>	<p>10) Add tens.</p> <p>A. $1 + 1 = 2$</p>	<p>11) Add hundreds.</p> <p>A. $8 + 2 = 10$</p>	<p>12) Add thousands.</p> <p>A. $7 + 1 + 1 = 9$</p>	<p>13) Add ten thousands.</p> <p>A. $2 + 0 = 2$</p> <p>B. So $907 \times 32 = 29,024$</p>
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Things to Remember

- Make sure you put your 0 in before you multiply the second number. If you don't your entire answer will be wrong!