

# How to Multiply by Double Digits

$$\begin{array}{r} 45 \\ \times 36 \\ \hline \end{array}$$

Step 1 Multiply the ones on the bottom by the ones on the top  
 $6 \text{ ones} \times 5 \text{ ones} = 30 \text{ ones}$   
 $30 \text{ ones} = 3 \text{ tens and } 0 \text{ ones}$

$$\begin{array}{r} 3 \\ 45 \\ \times 36 \\ \hline 0 \end{array}$$

Step 2 Put the ones in the ones place and regroup the tens above the tens place

$$\begin{array}{r} 3 \\ 45 \\ \times 36 \\ \hline 270 \end{array}$$

Step 3 Multiply the bottom ones by the top tens  
 $6 \text{ ones} \times 4 \text{ tens} = 24 \text{ tens}$

Step 4 Add the tens you regrouped in step 2  
 $24 \text{ tens} + 3 \text{ tens} = 27 \text{ tens}$

Step 5 Write down the answer to step 4 next to the ones

$$\begin{array}{r} 3 \\ 45 \\ \times 36 \\ \hline 270 \\ 0 \end{array}$$

Step 6 You now will be multiplying with the tens column  
Write a 0 in the ones column

$$\begin{array}{r} 3 \\ 45 \\ \times 36 \\ \hline 270 \\ 0 \end{array}$$

Step 7 Multiply the tens on the bottom by the ones on the top  
 $3 \text{ tens} \times 5 \text{ ones} = 15 \text{ tens}$   
 $15 \text{ tens} = 1 \text{ hundred and } 5 \text{ tens}$

$$\begin{array}{r} 1 \\ 3 \\ 45 \\ \times 36 \\ \hline 270 \\ 50 \end{array}$$

Step 8 Put the tens next to the 0 from step 6 and regroup the hundreds by placing them above the tens column

$$\begin{array}{r}
 1 \\
 3 \\
 \text{x } 45 \\
 \underline{36} \\
 270 \\
 50
 \end{array}$$

Step 9 Multiply the tens on the bottom by the tens on the top  
 3 tens x 4 tens = 12 hundreds

Step 10 Add the regrouped amount from step 8  
 12 hundreds + 1 hundred = 13 hundreds

$$\begin{array}{r}
 1 \\
 3 \\
 45 \\
 \text{x } 36 \\
 \hline
 270 \\
 1350
 \end{array}$$

Step 11 Write down the answer to step 10

$$\begin{array}{r}
 1 \\
 3 \\
 45 \\
 \text{x } 36 \\
 \hline
 270 \\
 1350 \\
 + 1350 \\
 \hline
 1620
 \end{array}$$

Step 12 Add the two numbers  
 0 ones + 0 ones = 0 ones

7 tens + 5 tens = 12 tens  
 12 tens = 1 hundred and 2 tens  
 Write the 2 in the tens place and regroup the 1 hundred

1 hundred + 2 hundreds + 3 hundreds = 6 hundreds

0 thousands + 1 thousand = 1 thousand