Multiplication Walkthrough - Shown on Two Sides

Multiply 3-Digit and 3-Digit Numbers

5 STEP PROCESS
Use color-match and Row/Cell references.

STEP 1: Multiply 746 x 5.
a) 5 x 6 = **3**0. Put 0 at R7C6.
   Carry **3** to R3C5.
b) 5 x 4 = 20. Add carried **3** to 20 = **2**3.
   Put 3 at R7C5. Carry **2** to R3C4.
c) 5 x 7 = 35. Add carried **2** to 35 = 37.
   Put 7 at R7C4 and put 3 at R7C3.
d) Answer to 746 x 5 = **3730** goes in R7.

STEP 2: Multiply 746 x 3.
a) 3 x 6 = **1**8. Put 8 at R8C5.
   Carry **1** to R2C5.
b) 3 x 4 = 12. Add carried **1** to 12 = **1**3.
   Put 3 at R8C4. Carry **1** to R2C4.
c) 3 x 7 = 21. Add carried **1** to 21 = 22.
   Put 2 at R8C3 and put 2 at R8C2.
d) Answer to 746 x 3 = **2238** goes in R8.

Top Grid

Column	C1	C2	C3	C4	C5	C6
R1				+4	+5	
R2				+1	+1	
R3				+2	+3	
R4				7	4	6
R5			x	9	3	5
R6						
R7			3	7	3	0
R8		2	2	3	8	
R9	+	6	7	1	4	
R10						

STEP 3: Multiply 746 x 9.
a) 9 x 6 = **5**4. Put 4 at R9C4.
   Carry **5** to R1C5.
b) 9 x 4 = 36. Add carried **5** to 36 = **4**1.
   Put 1 at R9C3. Carry **4** to R1C4.
c) 9 x 7 = 63. Add carried **4** to 63 = 67.
   Put 7 at R9C2 and put 6 at R9C1.
d) Answer to 746 x 9 = **6714** goes in R9.

Bottom Grid

Column	C1	C2	C3	C4	C5	C6
R1				+4	+5	
R2				+1	+1	
R3				+2	+3	
R4				7	4	6
R5			x	9	3	5
R6			+1	+1		
R7			3	7	3	0
R8		2	2	3	8	0
R9	+	6	7	1	4	0	0
R10		6	9	7	5	1	0

Numbers carried over in **STEP 5.**

STEP 4: Fill blanks with 0's.
Put 0's in R8C6, R9C6, and R9C5 as placeholders.

STEP 5: Add the numbers.
a) Carry as needed and put carries in R6.
b) Put answer of sum, **697510**, in R10.

Courtesy of **George Hartas**