Lesson 3-22: Use a VLOOKUP function for an exact lookup

Consider the following worksheet:

<table>
<thead>
<tr>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>Code</td>
<td>Description</td>
<td>Date</td>
<td>Cost price</td>
</tr>
<tr>
<td>6</td>
<td>BR48</td>
<td>Breitling Diograp 18K</td>
<td>1948</td>
<td>11,500.00</td>
</tr>
<tr>
<td>7</td>
<td>CA74</td>
<td>Cartier Tank 18K</td>
<td>1974</td>
<td>3,200.00</td>
</tr>
<tr>
<td>8</td>
<td>RO66</td>
<td>Rolex Tudor Oyster</td>
<td>1966</td>
<td>300.00</td>
</tr>
</tbody>
</table>

The retailer has created a stock code to save time when creating invoices. The code is made up of the first two letters of the watch description, along with the two last numbers of the date of manufacture.

When provided with a stock code, the VLOOKUP function can scan all of the codes in column A until a match is found and then return a value from the same row for any of the other columns.

In this lesson, you will create a VLOOKUP formula that will automatically return the Description of any watch, into column B when the user enters a stock code into column A.

1. Open Invoice-1 from your sample files folder.

2. Convert the range A5:G15 on the Stock worksheet into a table named Stock.

   This was covered in: Lesson 1-11: Convert a range into a table and add a total row and Lesson 1-17: Name a table and create an automatic structured table reference.

   When working with the VLOOKUP function in Excel 2013 it is best practice to use a table for the Table_array argument (see sidebar on facing page).

   Using a table will make the data dynamic. In other words, the VLOOKUP will still work correctly if you add and remove rows from the Stock table.

3. Insert a VLOOKUP function into cell B6 on the Invoice worksheet to find the description to match the Code in cell A6.

   1. Click in cell B6.
   2. Click: Formulas → Function Library → Lookup & Reference → VLOOKUP.

   The VLOOKUP Function Arguments dialog appears. It can be seen that the VLOOKUP function has three required arguments (shown in bold face) and one optional argument:
4 Add the Lookup_value argument.

This is the cell on the Invoice worksheet that provides the value to be searched for in Column A of the Stock worksheet. You want to look up the description for the watch that has the code CA74. This is contained in cell A6.

5 Add the Table_array argument.

The table array is the range, table or name (see sidebar) you will search for a match to the value in cell A6. VLOOKUP always searches the left-most column of the range, table or name.

1. Type Stock into the Table_array text box.

It is best practice to use a table for the Table_array argument (see sidebar).

6 Add the Col_index_num argument.

Counting from left to right, the Col_index_num argument is the column that contains the value you want to return. In this case, it is the Description column, so you want to return column 2.

7 Add the Range_lookup argument.

Beginners often overlook this vital argument because it is optional. If it is left blank, VLOOKUP will return an inexact match. Later, in Lesson 3-24: Use a VLOOKUP function for an inexact lookup, you’ll find why that might be useful, but in this case you want an error to be returned if the stock code is not found, so it is vital to set this argument to FALSE.

8 Click the OK button.

The description of the Cartier Tank 18K is returned to cell B6.

9 Save your work as Invoice-2.