From the MS Excel Help Files:

About cell and range references
A reference identifies a cell or a range of cells on a worksheet and tells Microsoft Excel where to look for the values or data you want to use in a formula. With references, you can use data contained in different parts of a worksheet in one formula or use the value from one cell in several formulas. You can also refer to cells on other sheets in the same workbook, to other workbooks, and to data in other programs. References to cells in other workbooks are called external references. References to data in other programs are called remote references.

The A1 reference style  By default, Excel uses the A1 reference style, which refers to columns with letters (A through IV, for a total of 256 columns) and refers to rows with numbers (1 through 65536). These letters and numbers are called row and column headings. To refer to a cell, enter the column letter followed by the row number. For example, D50 refers to the cell at the intersection of column D and row 50. To refer to a range of cells, enter the reference for the cell in the upper-left corner of the range, a colon (:), and then the reference to the cell in the lower-right corner of the range. The following are examples of references.

<table>
<thead>
<tr>
<th>To refer to</th>
<th>Use</th>
</tr>
</thead>
<tbody>
<tr>
<td>The cell in column A and row 10</td>
<td>A10</td>
</tr>
<tr>
<td>The range of cells in column A and rows 10 through 20</td>
<td>A10:A20</td>
</tr>
<tr>
<td>The range of cells in row 15 and columns B through E</td>
<td>B15:E15</td>
</tr>
<tr>
<td>All cells in row 5</td>
<td>5:5</td>
</tr>
<tr>
<td>All cells in rows 5 through 10</td>
<td>5:10</td>
</tr>
<tr>
<td>All cells in column H</td>
<td>H:H</td>
</tr>
<tr>
<td>All cells in columns H through J</td>
<td>H:J</td>
</tr>
<tr>
<td>The range of cells in columns A through E and rows 10 through 20</td>
<td>A10:E20</td>
</tr>
</tbody>
</table>

The difference between relative and absolute references
Relative references  When you create a formula, references to cells or ranges are usually based on their position relative to the cell that contains the formula. In the following example, cell B6 contains the formula =A5; Microsoft Excel finds the value one cell above and one cell to the left of B6. This is known as a relative reference. When you copy a formula that uses relative references, Excel automatically adjusts the references in the pasted formula to refer to different cells relative to the position of the formula. In the following example, the formula in cell B6, =A5, which is one cell above and to the left of B6, has been copied to cell B7. Excel has adjusted the formula in cell B7 to =A6, which refers to the cell that is one cell above and to the left of cell B7.

<table>
<thead>
<tr>
<th>A</th>
<th>B</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>100</td>
</tr>
<tr>
<td>6</td>
<td>200  =A5</td>
</tr>
<tr>
<td>7</td>
<td>100</td>
</tr>
</tbody>
</table>

Absolute references  If you don't want Excel to adjust references when you copy a formula to a different cell, use an absolute reference. For example, if your formula multiplies cell A5 with cell C1 (=A5*C1) and you copy the formula to another cell, Excel will adjust both references. You can create an absolute reference to cell C1 by placing a dollar sign ($) before the parts of the reference that do not change. To create an absolute reference to cell C1, for example, add dollar signs to the formula as follows: =A5*$C$1

<table>
<thead>
<tr>
<th>A</th>
<th>B</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>100</td>
</tr>
<tr>
<td>6</td>
<td>200  =A5</td>
</tr>
<tr>
<td>7</td>
<td>100</td>
</tr>
</tbody>
</table>

Switching between relative and absolute references  If you created a formula and want to change relative references to absolute (and vice versa), select the cell that contains the formula. In the formula bar, select the reference you want to change and then press F4. Each time you press F4, Excel toggles through the combinations: absolute column and absolute row (for example, $C$1); relative column and absolute row ($C$1); absolute column and relative row ($C$1); and relative column and relative row (C1). For example, if you select the address $A$1 in a formula and press F4, the reference becomes A$1. Press F4 again and the reference becomes $A1, and so on.