
Date Functions

The TODAY, WEEKDAY and NOW functions

Excel has a range of date and time functions that you can use to insert the current date in your worksheets automatically:

- ↳ The *TODAY* function returns the current date from the clock built into your computer
- ↳ The *WEEKDAY* function returns the day of the week for a given date - it returns a single digit ranging from 1 for a Sunday, to 7 for Saturday
- ↳ The *NOW* function returns the current date and time in a cell

None of these functions require arguments, but you must still put open and closing brackets after them. For instance, to display the current date and time in a cell, you would enter the formula `=NOW()`.

How Excel stores dates and times

Excel stores dates as ordinary numbers representing the number of days since January 1st, 1900. For instance, 20th March 1998 is stored as 35,874. Times are stored in the digits to the right of the decimal point. 6:00 AM is represented as 0.25, because it is a quarter of the way through the day.

In general you don't need to worry about this, but occasionally you may find that a date appears as an ordinary number, or a number appears as a date. To solve this problem you need to reformat the cell.

☞ *If you use a Macintosh, or interchange Excel files containing dates with Macintosh users, you may use a different system based on days since January 1st, 1904.*

Using dates and times in calculations

You can use dates and times in calculations. If you subtract one date from another, you will get the number of days between the two dates.

Formatting dates in functions

Dates can be formatted after they have been calculated using the *Format Cells* dialog box. Common custom formats are listed below:

YY	Show year as a 2-figure number
YYYY	Show year as a 4-figure number
MMM	Show month as three letters, e.g. Jan
MMMM	Show month name in full, e.g. January
DD	Show day as a number, e.g. 23
DDD	Show day name as three letters, e.g. Wed
DDDD	Show day name in full, e.g. Wednesday

The codes can be combined, for example, if the date were 23 Sep 2009:

DDD-DD-MMMM would show Sat-23-September
DD-MMM-YYYY would show 23-Sep-2009

Nesting date functions

Date functions can be nested. For example, if you wanted to see what the weekday number for today is, you would use the following nested formula:

```
=WEEKDAY(TODAY())
```

Exercises with step-by-step instructions

This section contains practical tasks with step-by-step instructions. You should complete the tasks in order.



- Open the *FunctionsDates* workbook from your course folder.

	A	B	C	D	E	F	G	H
1	Functions - Dates							
2								
3	Event	Date	Day					
4	Start of century	01/01/1900						
5	Amundsen reaches South Pole	14/12/1911						
6	Scott reaches South Pole	18/01/1912						
7	President Kennedy born	29/05/1917						
8	Queen Elizabeth II born	21/04/1926						
9	Hillary and Tensing reach summit of Everest	29/05/1953						
10	Gagarin is first man in space	12/04/1961						
11	President Kennedy assassinated	22/11/1963						
12	Armstrong walks on the moon	21/07/1969						
13	Today							
14	Now							

Task 1 ~ Use the TODAY function

In this task you will use the TODAY function to display today's date.

- In cell B13, type:
`=today()`
- Press **Enter**.

Today's date appears in cell B13.

Task 2 ~ Use the NOW function and format the answer

In this task you will use the NOW function to display the current time. You will also format the initial answer and update the value.

- In cell B14, type:
`=now()`
- Press **Enter**.

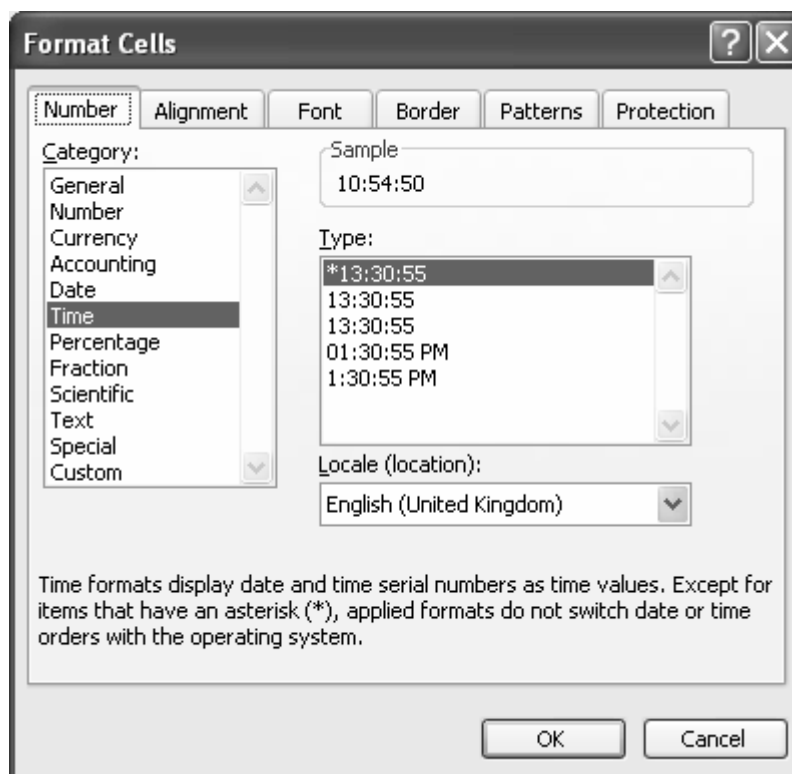
Today's date and time appears in cell B14. Assume that you want to show the time in a different format.

- Right-click cell B14 and choose **Format Cells**.

The *Format Cells* dialog box is displayed.

- Make sure that the **Number** tab is displayed.
- In the *Category* list, choose **Time**.

- In the *Type* list box, choose the first format ***13:30:55**.



- Click **OK**, or press **Enter**.

The current time, including seconds, is shown in the cell. You can update the time by pressing **F9** – watch the seconds value in the cell when you do this.

- Make sure that cell B14 is selected.
- Press **F9**.

The time is updated.

Task 3 ~ Use the WEEKDAY function and format the answer

In this task you will use the WEEKDAY function to display the weekday number for some dates, first using the *Insert Function* dialog box and then by typing the function directly. You will also format the cell to show the actual day.

Find the weekday for the start of the century in cell B4.

- In cell C4, type:
=weekday(B4)
- Press **Enter**.

The weekday is shown as a number between 1 and 7. In this case it is a 1, which means that the day was a Sunday. You can format the cell to show the actual weekday.

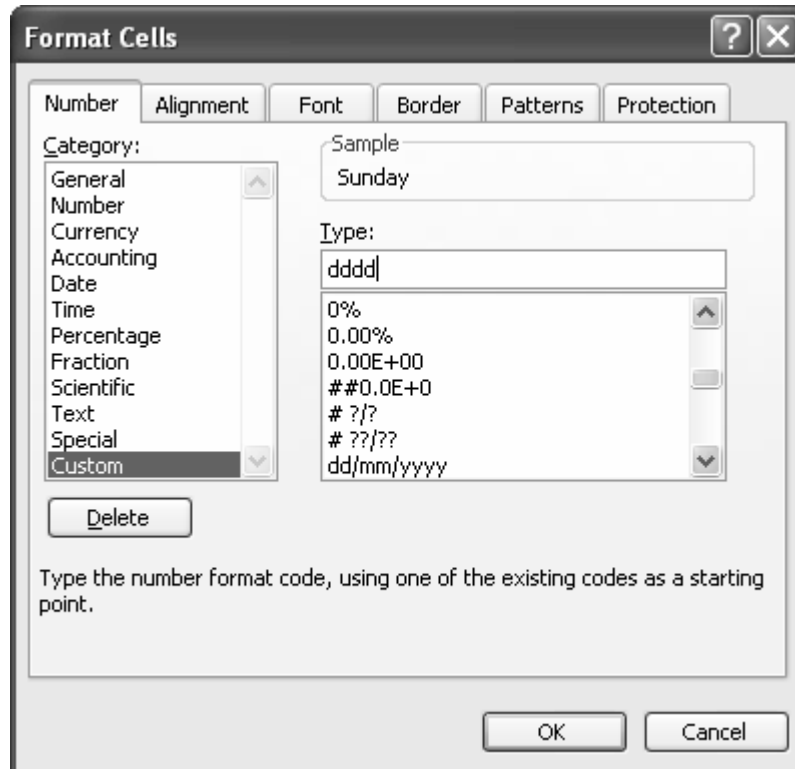
- Right-click cell C4 and choose **Format Cells**.

The *Format Cells* dialog box is displayed.

- Make sure that the **Number** tab is displayed.
- In the *Category* list, choose **Custom**.

The format to show the name of a day is **ddd** for the short version, or **dddd** for the full name. You will enter **dddd**, but watch the *Sample* box as you type each **d**.

- In the *Type* box, type:
dddd



- Click **OK**, or press **Enter**.
Sunday is shown in the cell.

Task 4 ~ Copying DATE functions

In this task you will copy the WEEKDAY function.

- Select cell C4.
- Press **Ctrl+C**.
- Select cell range C5 to C13.
- Press **Enter**.

All the dates now have their day named – you may need to adjust the column width to see them all.

Microsoft Excel - FunctionsDates								
File Edit View Insert Format Tools Data Window Help								
Type a question for help								
C5 =WEEKDAY(B5)								
	A	B	C	D	E	F	G	H
1	Functions - Dates							
2								
3	Event	Date	Day					
4	Start of century	01/01/1900	Sunday					
5	Amundsen reaches South Pole	14/12/1911	Thursday					
6	Scott reaches South Pole	18/01/1912	Thursday					
7	President Kennedy born	29/05/1917	Tuesday					
8	Queen Elizabeth II born	21/04/1926	Wednesday					
9	Hillary and Tensing reach summit of Everest	29/05/1953	Friday					
10	Gagarin is first man in space	12/04/1961	Wednesday					
11	President Kennedy assassinated	22/11/1963	Friday					
12	Armstrong walks on the moon	21/07/1969	Monday					
13	Today	21/03/2004	Sunday					

Task 5 ~ Adding and subtracting dates

In this task you will subtract one date from another. Assume that you want to know how many days elapsed between the birth and death of President Kennedy.

- Select cell D11.
- Type:
`=b11-b7`
- Press **Enter**.

Because all the other cells near D11 are dates, the answer may be formatted as a date - 25/06/1946. You need to format this cell as a number.

- Right-click cell D11 and choose **Format Cells**.

The *Format Cells* dialog box is displayed.

- Make sure that the **Number** tab is displayed.
- In the *Category* list, choose **General**.
- Click OK, or press **Enter**.

16978 is shown in the cell indicating how many days he lived.

Finishing off

You have now completed the tasks in this section.

- Close the current workbook - there is no need to save it.