

AgeFunc Function

How to calculate ages before 1/1/1900 in Excel

<http://support.microsoft.com/kb/245104>

Although Microsoft Excel date formulas can only use dates entered between 1/1/1900 and 12/31/9999, you can use a custom Microsoft Visual Basic for Applications function to calculate the age (in years) of someone or something that was first created before January 1, 1900.

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Excel enters dates prior to 1/1/1900 as text. This function works for dates entered as text beginning with 1/1/0001, normal dates, and can handle dates when the starting date is before 1900 and ending date is after 1900. To use the macro, follow these steps:

1. Start Excel. View the worksheet on which you want to use the function.
2. Press ALT+F11 to switch to the Visual Basic Editor.
3. On the Insert menu, click Module.
4. Type the following code in the module: This is the initial function. It takes in a start date and an end date.

```
Public Function AgeFunc(stdate As Variant, enddate As Variant)
```

```
    ' Dim our variables.  
    Dim stvar As String  
    Dim stmon As String  
    Dim stday As String  
    Dim styr As String  
    Dim endvar As String  
    Dim endmon As String  
    Dim endday As String  
    Dim endyr As String  
    Dim stmonf As Integer  
    Dim stdayf As Integer  
    Dim styrf As Integer  
    Dim endmonf As Integer  
    Dim enddayf As Integer
```

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Dim endyrf As Integer
Dim years As Integer

' This variable will be used to modify string length.
Dim fx As Integer
fx = 0

' Calls custom function sfunc which runs the Search worksheet function
' and returns the results.
' Searches for the first "/" sign in the start date.
stvar = sfunc("/", stdate)

' Parse the month and day from the start date.
stmon = Left(stdate, sfunc("/", stdate) - 1)
stday = Mid(stdate, stvar + 1, sfunc("/", stdate, sfunc("/", stdate) + 1) -
stvar - 1)

' Check the length of the day and month strings and modify the string
' length variable.
If Len(stday) = 1 Then fx = fx + 1
If Len(stmon) = 2 Then fx = fx + 1

' Parse the year, using information from the string length variable.
styr = Right(stdate, Len(stdate) - (sfunc("/", stdate) + 1) - stvar + fx)

' Change the text values we obtained to integers for calculation
' purposes.
stmonf = CInt(stmon)
stdayf = CInt(stday)
styrf = CInt(styr)

' Check for valid date entries.
If stmonf < 1 Or stmonf > 12 Or stdayf < 1 Or stdayf > 31 Or styrf < 1 Then
    AgeFunc = "Invalid Date"
    Exit Function
End If

' Reset the string length variable.
fx = 0

' Parse the first "/" sign from the end date.
endvar = sfunc("/", endate)

' Parse the month and day from the end date.
endmon = Left(endate, sfunc("/", endate) - 1)
endday = Mid(endate, endvar + 1, sfunc("/", endate, sfunc("/", endate) + 1) -
- endvar - 1)

' Check the length of the day and month strings and modify the string
' length variable.
If Len(endday) = 1 Then fx = fx + 1
If Len(endmon) = 2 Then fx = fx + 1

' Parse the year, using information from the string length variable.
endyr = Right(endate, Len(endate) - (sfunc("/", endate) + 1) - endvar + fx)

' Change the text values we obtained to integers for calculation
' purposes.
endmonf = CInt(endmon)
enddayf = CInt(endday)
endyrf = CInt(endyr)

' Check for valid date entries.

```

```

    If endmonf < 1 Or endmonf > 12 Or enddayf < 1 Or enddayf > 31 Or endyrf < 1
Then
    AgeFunc = "Invalid Date"
    Exit Function
End If

' Determine the initial number of years by subtracting the first and
' second year.
years = endyrf - styrf

' Look at the month and day values to make sure a full year has passed.
If stmonf > endmonf Then
    years = years - 1
End If

If stmonf = endmonf And stdayf > enddayf Then
    years = years - 1
End If

' Make sure that we are not returning a negative number and, if not,
' return the years.
If years < 0 Then
    AgeFunc = "Invalid Date"
Else
    AgeFunc = years
End If

End Function

' This is a second function that the first will call.
' It runs the Search worksheet function with arguments passed from AgeFunc.
' It is used so that the code is easier to read.

Public Function sfunc(x As Variant, y As Variant, Optional z As Variant)
    sfunc = Application.WorksheetFunction.Search(x, y, z)

End Function

```

5. Save the file.

6. Type the following data:

A1 01/01/1887

A2 02/02/1945

In cell A3, enter the following formula

=AgeFunc(startdate,enddate)

where startdate is a cell reference to your first date (A1) and enddate is a cell reference to your second date (A2).

The result should be 58.

NOTE: Check all dates before 1/1/1900 for validity. Dates entered as text are not checked by Excel.