

# VBA

I Copy all negative values from Sheet1 column A to the same Sheet column C.  
(start at Sheet1 column A row 1 till you find an empty cell)

III Fill Sheet1 range A1:A20 with the first 20 multiples of 3.

III Create a function to return the number of vowels in a given string.  
(Exp. If the string is "I LOVE VBA", function should return 4)

IV Create a function to return a random value from a given range.  
(the range can contain several rows and columns)

V Create a function to return the sum of all multiple of 5 values in a given range.  
(the range can contain several rows and columns and you can assume that all the cells contain integer values)

VI Change the previous function so you can sum the multiples of any given integer.

VI I Transform the following For Next structure in to an equivalent Do While...Loop

```
Dim X as integer, Y as integer
```

```
Y=50
```

```
For X=10 to 2 Step -2
```

```
    Y= Y-X
```

```
Next
```

I

```
Sub CopyNeg
```

```
Dim r1 as integer, r2 as integer
```

```
r1=1
```

```
r2=1
```

```
Do while not IsEmpty(sheet1.cells(r1,1))
```

```
  if sheet1.cells(r1,1)<0 then
```

```
    sheet1.cells(r2,3) = sheet1.cells(r1,1)
```

```
    r2=r2+1
```

```
  end if
```

```
r1=r1+1
```

```
Loop
```

```
End Sub
```

II

```
Sub Mult3
```

```
dim X as integer
```

```
For X=1 to 20
```

```
  cells(X,1)= 3*X
```

```
Next
```

```
End Sub
```

III

```
Function CountV(ByVal S as string) as Integer
```

```
Dim c as integer, P as integer, L as string
```

```
S = Ucase(S)
```

```
C=0
```

```
For P=1 to len(S)
```

```
  L = MID(S,P,1)
```

```
  if (L="A") OR (L="E") OR (L="I") OR (L="O") OR (L="U") Then
```

```
    C=C+1
```

```
End If
```

```
Next
```

```
CountV=C
```

```
End Function
```

Note: Ucase is the UPPER Excel equivalent

IV

Function RandomVal(ByRef MyRange As Range) As Variant

```
Dim nr As Integer, nc As Integer
Dim AleR As Integer, AleC As Integer
nr = MyRange.Rows.Count
nc = MyRange.Columns.Count
AleR = Int(1 + nr * Rnd)
AleC = Int(1 + nc * Rnd)
RandomVal = MyRange.Cells(AleR, AleC)
End Function
```

V

Function SumMult5(ByRef MyRange As Range) As Long

```
Dim nr As Integer, nc As Integer
Dim r As Integer, c As Integer
Dim s As Long
nr = MyRange.Rows.Count
nc = MyRange.Columns.Count
s = 0
For r = 1 To nr
  For c = 1 To nc
    If MyRange.Cells(r, c) Mod 5 = 0 Then
      s = s + MyRange.Cells(r, c)
    End If
  Next
Next
SumMult5 = s
End Function
```

VI

' You need an additional argument

Function SumMultX(ByRef MyRange As Range, **ByVal X As Long**) As Long

```
Dim nr As Integer, nc As Integer
Dim r As Integer, c As Integer
Dim s As Long
nr = MyRange.Rows.Count
nc = MyRange.Columns.Count
s = 0
For r = 1 To nr
  For c = 1 To nc

    If MyRange.Cells(r, c) Mod X = 0 Then
      s = s + MyRange.Cells(r, c)
    End If
  Next
Next
SumMultX = s
End Function
```

VI

Dim X as integer, Y as integer

X=10

Y=50

Do While X>=2

Y = Y-X

X= X-2

Loop