

Here is routine to calculate the date of easter given the year.

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' Easter date Calculations
' program by HarmonV Feb 2007

global month$
month$ = "Jan Feb March April May June July Aug Sep Oct Nov Dec"

cls : print
print "This program will find the Gregorian date "
print "on which Easter Sunday will occur."
print "It's valid for any Gregorian year (>=1583)"

do
  do
    input "Enter year (1583 to 4099, or 0 to exit): "; yy
    if yy=0 then stop
    loop until yy>1582 and yy<4100

    easter$ = HVEaster$(yy)
    print "Easter will occur on ";easter$

    input "Another date? (Y/N) : "; a$
    loop until (upper$(a$)="N")

  print "Done."
end
' ----- end of main program -----

function HVEaster$(yy)
  gn = yy mod 19 + 1      ' Golden Number
  c = int(yy/100)+1      ' Century
  JE = (11*(gn-1)) mod 30 ' Julian Epact #
  S = int(3*c/4)          ' Solar Equation (3 non-
leap days every 4 centuries)
  L = int((8*c+5)/25)
' Lunar Equation (8 days every 25 centuries)
  GE = JE - S + L + 8     ' Gregorian Epact #
  if GE<1 then GE = GE + 30*(1+int(abs(GE)/30))
  GE = GE mod 30

' efm = Ecclesiastical full moon (22=Mar 22nd, 32=Apr 1st, etc)
  if GE<24 then efm = 44-GE
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if GE>23 then efm = 74-GE
if (GE=24) or (GE=25 and gn>11) then efm = efm - 1

wd = (efm + 2 + yy + int(yy/4) - int(yy/100) + int(yy/400) ) mod 7
ed = efm + 7 - wd      ' Easter Day = first Sunday after EFM
mm = 3+int(ed/32)
dd = ed - 31*int(mm/4)
HVEaster$ = word$(month$, mm)+" "+str$(dd)+", "+str$(yy)
end function
```