

```

Sub Retire()
' Retire Macro
' Macro recorded by Helen Maynard
' © 2009 Affine Financial Services, LLC. All Rights Reserved.
'
'Disclaimer: The program is provided for educational purposes only.
'It may not include factors that are significant for your particular
'financial situation. Please consult a financial professional for
'retirement advice.
'
' Keyboard Shortcut: Ctrl+r
'
'Find number of years for plan
  Sheets("Input").Select
  Range("D5").Select
  CurYear = ActiveCell.Offset(-1, 0)
  Name1 = ActiveCell.Offset(0, -2)
  CurAge1 = ActiveCell.Offset(0, 0)
  ExpectRetireAge1 = ActiveCell.Offset(1, 0)
  LifeExpectancy1 = ActiveCell.Offset(2, 0)
  TotalYears1 = LifeExpectancy1 - CurAge1
  TotalFundingYears1 = ExpectRetireAge1 - CurAge1
  TotalRetireYears1 = LifeExpectancy1 - ExpectRetireAge1
  CurRetAssets1 = ActiveCell.Offset(3, 0)
  CurSalary1 = ActiveCell.Offset(4, 0)
  PerSalaryRet1 = ActiveCell.Offset(5, 0)
  ExpectSalaryInc1 = ActiveCell.Offset(6, 0)
  SocSecBene1 = ActiveCell.Offset(7, 0)

  Range("D14").Select
  Name2 = ActiveCell.Offset(0, -2)
  CurAge2 = ActiveCell.Offset(0, 0)
  ExpectRetireAge2 = ActiveCell.Offset(1, 0)
  LifeExpectancy2 = ActiveCell.Offset(2, 0)
  TotalYears2 = LifeExpectancy2 - CurAge2
  TotalFundingYears2 = ExpectRetireAge2 - CurAge2
  TotalRetireYears2 = LifeExpectancy2 - ExpectRetireAge2
  CurRetAssets2 = ActiveCell.Offset(3, 0)
  CurSalary2 = ActiveCell.Offset(4, 0)
  PerSalaryRet2 = ActiveCell.Offset(5, 0)
  ExpectSalaryInc2 = ActiveCell.Offset(6, 0)
  SocSecBene2 = ActiveCell.Offset(7, 0)

  Range("D24").Select
  WRR = ActiveCell.Offset(0, 0)
  RetNeed1 = (CurSalary1 * WRR) - SocSecBene1
  RetNeed2 = (CurSalary2 * WRR) - SocSecBene2
  IncomeReductionAfterFirstDeath = ActiveCell.Offset(1, 0)

  MeanRetRetireFund = ActiveCell.Offset(3, 0)
  SigmaRetRetireFund = ActiveCell.Offset(4, 0)

  MeanInflationRate = ActiveCell.Offset(6, 0)
  SigmaInflationRate = ActiveCell.Offset(7, 0)

  NumberIterations = ActiveCell.Offset(9, 0)
  If TotalYears1 > TotalYears2 Then TotalYears = TotalYears1 Else
TotalYears = TotalYears2
'Clear output sheet
  Sheets("Output").Select

```

```

Columns("A:N").Select
Selection.ClearContents
Range("p4:r1004").Select
Selection.ClearContents

'Create array of years
Range("C4").Select
ActiveCell.Offset(-1, 0) = "Year"
ActiveCell.Offset(0, 0).Value = CurYear
For i = 1 To TotalYears
    ActiveCell.Offset(i, 0).Value = CurYear + i
Next i

'Create array of age for first person
Range("C4").Select
ActiveCell.Offset(-1, -2) = Name1
ActiveCell.Offset(0, -2).Value = CurAge1
For i = 1 To TotalYears1
    ActiveCell.Offset(i, -2).Value = CurAge1 + i
Next i

'Create array of age for second person
Range("C4").Select
ActiveCell.Offset(-1, -1) = Name2
ActiveCell.Offset(0, -1).Value = CurAge2
For i = 1 To TotalYears2
    ActiveCell.Offset(i, -1).Value = CurAge2 + i
Next i

'Create array of retirement funding for first person
ActiveCell.Offset(-2, 1) = Name1
ActiveCell.Offset(-1, 1) = "Funding"
For i = 0 To TotalYears
    If i < TotalFundingYears1 Then ActiveCell.Offset(i, 1).Value =
Cursalary1 * PerSalaryRet1 * (1 + ExpectSalaryIncl) ^ i Else
ActiveCell.Offset(i, 1).Value = 0
Next i

'Create array of retirement funding for second person
ActiveCell.Offset(-2, 2) = Name2
ActiveCell.Offset(-1, 2) = "Funding"
For i = 0 To TotalYears
    If i < TotalFundingYears2 Then ActiveCell.Offset(i, 2).Value =
Cursalary2 * PerSalaryRet2 * (1 + ExpectSalaryInc2) ^ i Else
ActiveCell.Offset(i, 2).Value = 0
Next i

'Create array of total funding
ActiveCell.Offset(-2, 3) = "Total"
ActiveCell.Offset(-1, 3) = "Funding"
For i = 0 To TotalYears
    ActiveCell.Offset(i, 3) = ActiveCell.Offset(i, 1) +
ActiveCell.Offset(i, 2)
Next i

'Create column Title for final amount in retirement fund
Range("P4").Select
ActiveCell.Offset(-2, 0) = "Remaining"
ActiveCell.Offset(-1, 0) = "Amount"
ActiveCell.Offset(-2, 1) = "Investment"
ActiveCell.Offset(-1, 1) = "Return"
ActiveCell.Offset(-2, 2) = "Total"
ActiveCell.Offset(-1, 2) = "Inflation"

```

```

For NumIter = 0 To NumberIterations
'Clear output area
  Range("G4:i100").Select
  Selection.ClearContents
'Create array for inflation rates
  Range("G4").Select
  ActiveCell.Offset(-2, 0) = "Inflation"
  ActiveCell.Offset(-1, 0) = "Random"
  For i = 0 To TotalYears + 5
    ActiveCell.Offset(i, 0).Value = MeanInflationRate + 2 * (Rnd -
0.5) * SigmaInflationRate
  Next i

  ActiveCell.Offset(-2, 1) = "Inflation"
  ActiveCell.Offset(-1, 1) = "Smoothed"
  For i = 0 To TotalYears
    Sum = 0
    For j = 0 To 4
      Sum = Sum + ActiveCell.Offset(i + j, 0).Value
    Next j
    ActiveCell.Offset(i, 1).Value = Sum / 5
  Next i

  ActiveCell.Offset(-2, 2) = "Inflation"
  ActiveCell.Offset(-1, 2) = "Total"
  ActiveCell.Offset(0, 2) = 1 + ActiveCell.Offset(0, 1)
  For i = 1 To TotalYears
    ActiveCell.Offset(i, 2) = ActiveCell.Offset(i - 1, 2) * (1 +
ActiveCell.Offset(i, 1))
  Next i

'Calculate amount needed to fund retirement each year for person1
  Range("J4").Select
  ActiveCell.Offset(-2, 0) = Name1
  ActiveCell.Offset(-1, 0) = "Need"
  For i = 0 To TotalFundingYears1
    ActiveCell.Offset(i, 0) = 0
  Next i

  For i = TotalFundingYears1 To TotalYears1
    ActiveCell.Offset(i, 0) = RetNeed1 * ActiveCell.Offset(i, -1)
  Next i

  For i = TotalYears1 + 1 To TotalYears
    ActiveCell.Offset(i, 0) = RetNeed1 * ActiveCell.Offset(i, -1) *
IncomeReductionAfterFirstDeath
  Next i

'Calculate amount needed to fund retirement each year for person2
  ActiveCell.Offset(-2, 1) = Name2
  ActiveCell.Offset(-1, 1) = "Need"
  For i = 0 To TotalFundingYears2
    ActiveCell.Offset(i, 1) = 0
  Next i

  For i = TotalFundingYears2 To TotalYears2
    ActiveCell.Offset(i, 1) = RetNeed2 * ActiveCell.Offset(i, -1)
  Next i

  For i = TotalYears2 + 1 To TotalYears

```

```

        ActiveCell.Offset(i, 1) = RetNeed2 * ActiveCell.Offset(i, -1) *
IncomeReductionAfterFirstDeath
    Next i

'Create array of total need
    ActiveCell.Offset(-2, 2) = "Total"
    ActiveCell.Offset(-1, 2) = "Need"
    For i = 0 To TotalYears
        ActiveCell.Offset(i, 2) = ActiveCell.Offset(i, 1) +
ActiveCell.Offset(i, 0)
    Next i

'Create array for return rates
    TotalReturn = 1
    Range("M4").Select
    ActiveCell.Offset(-2, 0) = "Return"
    ActiveCell.Offset(-1, 0) = "Random"
    For i = 0 To TotalYears
        ActiveCell.Offset(i, 0).Value = MeanRetRetireFund + 2 * (Rnd -
0.5) * SigmaRetRetireFund

        TotalReturn = TotalReturn * (1 + ActiveCell.Offset(i, 0))
    Next i

'Create array for total retirement amout
    Range("N4").Select
    ActiveCell.Offset(-2, 0) = "Retirement"
    ActiveCell.Offset(-1, 0) = "Fund"
    ActiveCell.Offset(0, 0) = (CurRetAssets1 + CurRetAssets2 +
ActiveCell.Offset(0, -8)) * (1 + ActiveCell.Offset(0, -1))
    For i = 1 To TotalYears
        ActiveCell.Offset(i, 0) = (ActiveCell.Offset(i - 1, 0) +
ActiveCell.Offset(i, -8)) * (1 + ActiveCell.Offset(i, -1)) -
ActiveCell.Offset(i, -2)
    Next i

'Record final answer
    Range("P4").Select
    ActiveCell.Offset(NumIter, 0) = ActiveCell.Offset(TotalYears, -2)
    ActiveCell.Offset(NumIter, 1) = TotalReturn
    ActiveCell.Offset(NumIter, 2) = ActiveCell.Offset(TotalYears, -7)

Next NumIter

Sheets("Input").Select
Range("e4").Select

End Sub

```