

Public Class Form1

```
Dim b, a, op, y, x, ans As New ArrayList
Dim rno As Integer '記錄資料筆數
Private Sub Form1_Load(ByVal sender As System.Object, ByVal e As System.EventArgs) Handles MyBase.Load
    Call rdata()
    Call sp()
    Call wdata()
End Sub
```

```
Sub rdata()
    FileOpen(8, "1060308.t01", OpenMode.Input)
    Dim d '用來輸入數字及運算符號，不宣告資料型態
    Do Until EOF(8)
        Input(8, d) : b.Add(d)
        Input(8, d) : a.Add(d)
        Input(8, d) : op.Add(d)
        Input(8, d) : y.Add(d)
        Input(8, d) : x.Add(d)
        rno += 1
    Loop
    FileClose(8)
End Sub
```

```
Sub sp()
    Dim m1, m2, f As Integer 'm1為答案的分子、m2為答案的分母、f為約分的公因數
    For i = 0 To rno - 1 'Arraylist註標從0開始到rno-1，共rno筆資料
        '以下根據運算符號套不同公式求分子及分母
        Select Case op(i)
            Case "+"
                m1 = b(i) * x(i) + a(i) * y(i)
                m2 = a(i) * x(i)
            Case "-"
                m1 = b(i) * x(i) - a(i) * y(i)
                m2 = a(i) * x(i)
            Case "*"
                m1 = b(i) * y(i)
                m2 = a(i) * x(i)
            Case "/"
                m1 = b(i) * x(i)
                m2 = a(i) * y(i)
        End Select
        '下列為約分的程式碼
        f = 2 '約分因數從2開始代入
        Do While f <= Math.Abs(m1) And f <= Math.Abs(m2) '若因數大於分子或分母的絕對值，則完成約分
            Do While m1 Mod f = 0 And m2 Mod f = 0 '若f為m1及m2的公因數，則重覆約分
                m1 = m1 \ f
                m2 = m2 \ f
            Loop
            f = f + 1
        Loop
    Loop
```

```

'將答案加入ans中
If m1 = 0 Then      '若分子為0，則答案為0
    ans.Add(0)
ElseIf m2 = 1 Then '若分母為1，則答案為分子
    ans.Add(m1)
Else
    ans.Add(m1 & "/" & m2)
End If
Next                '注意next的位置在此處
End Sub

```

```

Sub wdata()
    Dim dt As New DataTable
    dt.Columns.Add("VALUE1")
    dt.Columns.Add("OP")
    dt.Columns.Add("VALUE2")
    dt.Columns.Add("ANSWER")
    For i = 0 To rno - 1
        Dim dr As DataRow = dt.NewRow
        dr(0) = b(i) & "/" & a(i)
        dr(1) = op(i)
        dr(2) = y(i) & "/" & x(i)
        dr(3) = ans(i)
        dt.Rows.Add(dr)
    Next
    dgv.DataSource = dt
    '以下程式碼亦可透過屬性視窗設定，要認得關鍵字(黃色網底)
    'dgv.ColumnHeadersDefaultCellStyle.Alignment = DataGridViewContentAlignment.MiddleCenter
    'dgv.DefaultCellStyle.Alignment = DataGridViewContentAlignment.MiddleCenter
End Sub

```

End Class