1. **Easy**

Sub challenge1():

' Set Dimensions

Dim total As Double

' get the row number of the last row with data

rowCount = Cells(Rows.Count, "A").End(xlUp).Row

' Set title row

Range("I1").Value = "Ticker"

Range("J1").Value = "Total Stock Volume"

For i = 2 To rowCount

' If ticker changes then print results

If Cells(i + 1, 1).Value <> Cells(i, 1).Value Then

' Stores results in variable

total = total + Cells(i, 7).Value

' Print ticker symbol

Range("I" & 2 + j).Value = Cells(i, 1).Value

' Print total

Range("J" & 2 + j).Value = total

' Reset Total

total = 0

' Move to next row

j = j + 1

' Else keep adding to the total volume

Else

total = total + Cells(i, 7).Value

End If

Next i

End Sub

1. **Moderate**

Sub stock\_analysis():

' Set dimensions

Dim total As Double

Dim i As Long

Dim change As Single

Dim j As Integer

Dim start As Long

Dim rowCount As Long

Dim percentChange As Single

Dim days As Integer

Dim dailyChange As Single

Dim averageChange As Single

' Set title row

Range("I1").Value = "Ticker"

Range("J1").Value = "Yearly Change"

Range("K1").Value = "Percent Change"

Range("L1").Value = "Total Stock Volume"

' Set initial values

j = 0

total = 0

change = 0

start = 2

' get the row number of the last row with data

rowCount = Cells(Rows.Count, "A").End(xlUp).Row

For i = 2 To rowCount

' If ticker changes then print results

If Cells(i + 1, 1).Value <> Cells(i, 1).Value Then

' Stores results in variables

total = total + Cells(i, 7).Value

' Handle zero total volume

If total = 0 Then

' print the results

Range("I" & 2 + j).Value = Cells(i, 1).Value

Range("J" & 2 + j).Value = 0

Range("K" & 2 + j).Value = "%" & 0

Range("L" & 2 + j).Value = 0

Else

' Find First non zero starting value

If Cells(start, 3) = 0 Then

For find\_value = start To i

If Cells(find\_value, 3).Value <> 0 Then

start = find\_value

Exit For

End If

Next find\_value

End If

' Calculate Change

change = (Cells(i, 6) - Cells(start, 3))

percentChange = Round((change / Cells(start, 3) \* 100), 2)

' start of the next stock ticker

start = i + 1

' print the results

Range("I" & 2 + j).Value = Cells(i, 1).Value

Range("J" & 2 + j).Value = Round(change, 2)

Range("K" & 2 + j).Value = "%" & percentChange

Range("L" & 2 + j).Value = total

' colors positives green and negatives red

Select Case change

Case Is > 0

Range("J" & 2 + j).Interior.ColorIndex = 4

Case Is < 0

Range("J" & 2 + j).Interior.ColorIndex = 3

Case Else

Range("J" & 2 + j).Interior.ColorIndex = 0

End Select

End If

' reset variables for new stock ticker

total = 0

change = 0

j = j + 1

days = 0

' If ticker is still the same add results

Else

total = total + Cells(i, 7).Value

End If

Next i

End Sub

1. **Hard**

Sub stock\_analysis2():

' Set dimensions

Dim total As Double

Dim i As Long

Dim change As Single

Dim j As Integer

Dim start As Long

Dim rowCount As Long

Dim percentChange As Single

Dim days As Integer

Dim dailyChange As Single

Dim averageChange As Single

' Set title row

Range("I1").Value = "Ticker"

Range("J1").Value = "Yearly Change"

Range("K1").Value = "Percent Change"

Range("L1").Value = "Total Stock Volume"

Range("P1").Value = "Ticker"

Range("Q1").Value = "Value"

Range("O2").Value = "Greatest % Increase"

Range("O3").Value = "Greatest % Decrease"

Range("O4").Value = "Greatest Total Volume"

' Set initial values

j = 0

total = 0

change = 0

start = 2

' get the row number of the last row with data

rowCount = Cells(Rows.Count, "A").End(xlUp).Row

For i = 2 To rowCount

' If ticker changes then print results

If Cells(i + 1, 1).Value <> Cells(i, 1).Value Then

' Stores results in variables

total = total + Cells(i, 7).Value

' Handle zero total volume

If total = 0 Then

' print the results

Range("I" & 2 + j).Value = Cells(i, 1).Value

Range("J" & 2 + j).Value = 0

Range("K" & 2 + j).Value = "%" & 0

Range("L" & 2 + j).Value = 0

Else

' Find First non zero starting value

If Cells(start, 3) = 0 Then

For find\_value = start To i

If Cells(find\_value, 3).Value <> 0 Then

start = find\_value

Exit For

End If

Next find\_value

End If

' Calculate Change

change = (Cells(i, 6) - Cells(start, 3))

percentChange = Round((change / Cells(start, 3) \* 100), 2)

' start of the next stock ticker

start = i + 1

' print the results

Range("I" & 2 + j).Value = Cells(i, 1).Value

Range("J" & 2 + j).Value = Round(change, 2)

Range("K" & 2 + j).Value = "%" & percentChange

Range("L" & 2 + j).Value = total

' colors positives green and negatives red

Select Case change

Case Is > 0

Range("J" & 2 + j).Interior.ColorIndex = 4

Case Is < 0

Range("J" & 2 + j).Interior.ColorIndex = 3

Case Else

Range("J" & 2 + j).Interior.ColorIndex = 0

End Select

End If

' reset variables for new stock ticker

total = 0

change = 0

j = j + 1

days = 0

' If ticker is still the same add results

Else

total = total + Cells(i, 7).Value

End If

Next i

' take the max and min and place them in a separate part in the worksheet

Range("Q2") = "%" & WorksheetFunction.Max(Range("K2:K" & rowCount)) \* 100

Range("Q3") = "%" & WorksheetFunction.Min(Range("K2:K" & rowCount)) \* 100

Range("Q4") = WorksheetFunction.Max(Range("L2:L" & rowCount))

' returns one less because header row not a factor

increase\_number = WorksheetFunction.Match(WorksheetFunction.Max(Range("K2:K" & rowCount)), Range("K2:K" & rowCount), 0)

decrease\_number = WorksheetFunction.Match(WorksheetFunction.Min(Range("K2:K" & rowCount)), Range("K2:K" & rowCount), 0)

volume\_number = WorksheetFunction.Match(WorksheetFunction.Max(Range("L2:L" & rowCount)), Range("L2:L" & rowCount), 0)

' final ticker symbol for total, greatest % of increase and decrease, and average

Range("P2") = Cells(increase\_number + 1, 9)

Range("P3") = Cells(decrease\_number + 1, 9)

Range("P4") = Cells(volume\_number + 1, 9)

End Sub