```r
#=============================================================================
#                          Using R: Concordance and Discordance
#=============================================================================
#calculate the number of concordant and discordant pairs.
x <- c(3, 4, 2, 1, 7, 6, 5)
y <- c(4, 3, 7, 6, 5, 2, 1)
#Number of Concordant pairs
conc <- 0
for(i in 1:(length(x)-1)){
  conc1 <- 0
  conc2 <- 0
  for(j in i:(length(x)-1)){
    if(x[j+1]>x[i]){
      conc1 <- conc1 + 1
    }
    if(y[j+1]>y[i]){
      conc2 <- conc2 + 1
    }
  }
  conc <- conc + min(conc1,conc2)
}
#Number of Discordant pairs
disc <- 0
for(i in 1:(length(x)-1)){
  conc1 <- 0
  conc2 <- 0
  for(j in i:(length(x)-1)){
    if(x[j+1]>x[i]){
      conc1 <- conc1 + 1
    }
    if(y[j+1]<y[i]){
      conc2 <- conc2 + 1
    }
  }
  disc <- disc + conc2
}

#This 2 line is for verification
Tau <- (conc-disc)/(conc+disc)
Tau
## [1] -0.4285714
cor(x,y,method = "kendall")
## [1] -0.4285714
```