

```

fdr<-function(v1,Q){ #create fdr function
  o1<-order(v1) #orders vector 1 in ascending order in o1
  pvec<-v1[o1] #pvec vector creates v1 in o1 order
  m<-length(v1) #count tests
  qline<-Q*c(1:m)/m
  plot(c(c(1:m),c(1:m)),c(qline,pvec),type="n",xlab="hypothesis",ylab="pvalue") #plot sorted
values
  lines(c(1:m),qline) #creates c and qline line segment
  points(c(1:m),pvec) #plots c and pvec points
  dv<-pvec-qline #creates dv function-- difference between sorted v1 vector and qline
  l1<-(dv<0) #assigns negative dv values as l1
  pmax<-max(pvec[l1]) #assigns the maximum value in pvec[l1] as pmax
  l2<-pvec<=pmax #assigns pvec values less or equal to pmax as l2
  points(c(1:m)[l2],pvec[l2],col="red") #plots c and pvec in red
  o1[l2] #order l2
}

```

```

> fdr(pvector,.02)
[1] 7 8 16 2 13 4 5 6 10 15 3 9 18 1 19 17 11 12
[19] 20 14 231
> pvector<-c(1e-6*runif(20),runif(400))
> fdr(pvector,.02)
[1] 14 17 6 16 18 9 13 19 4 7 12 3 5 15 20 11 8 1
[19] 2 10 276

```

