install.packages("pracma")

library(pracma)

fn<-function(x,y){

  a<-2\*(2\*x+3\*y)/5

  return a;

}

aa<-integral2(fn,xmin=0,xmax=1,ymin=0,ymax=1)

print(ans$Q)

fn1<-function(y){

  b<-2\*(2\*1+3\*y)/5

  return b

}

bb<-integral(fn1,0,1)

print(bb)

fn3<-function(x){

  c<-2\*(2\*x+3\*0)/5

  return c;

}

cc<-integral(fn3,0,1)

print(cc)

fn4<-function(x,y){

  d<-x\*y\*2\*(2\*x+3\*y)/5

  return d;

}

dd<-integral2(fn4,xmin=0,xmax=1,ymin=0,ymax=1)

print(dd)

fnm<-function(x,y){

  value<-(x,y)/30

  return(value)

}

x<-c(0,1,2,3)

y<-c(0,1,2)

m<-matrix(c(fnm(0,0:2),fnm(1,0:2),fnm(2,0:2),fnm(3,0:2),nrow=4,ncol=3,byrow=TRUE))

print(m)

print(sum(m))

xs<-print(apply(m,1,sum))

ys<-print(apply(m,2,sum))

ele<-m[1,2]

app<-apply(m,2,sum)

print(ele/app[2])

print(sum(x\*xs))

print(sum(y\*ys))

fxy<-function(x,y){

  x\*y\*(x+y)/30

}

x<-c(0,1,2,3)

y<-c(0,1,2)

mx<-matrix(c(fxy(0,0:2),fxy(1,0:2),fxy(2,0:2),fxy(3,0:2),nrow=4,ncol=3,byrow=TRUE))

print(sum(mxy))