**R ASSIGNMENT 4**

**#**Q1

w <- c(0,1,2,3,4)

s<- sum(w)

x <- c(.41,.37,.16,.05,.01)

print(weighted.mean(w%\*%x,s))

OUTPUT

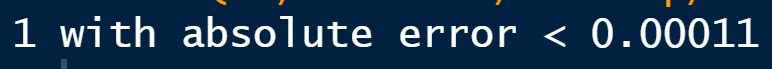


#Q2

integrand <- function(t) {0.1\*exp(-0.1\*t)}

print(integrate(integrand,lower=0,upper=Inf))

OUTPUT



#Q3

x=c(0,1,2,3)

p=c(.1,.2,.2,.5)

ss=sum(x)

s=(weighted.mean(x%\*%p,ss))

fun <- function(t) {(12\*t)+(2\*(3-t))-(3\*6)}

print(fun(s))

OUTPUT



#Q4

f= function(x) {(x-0)\*(0.5\*exp(-1\*abs(x)))}

print(integrate(f,-Inf,Inf))

f2= function(x) {((x-0)\*\*2)\*(0.5\*exp(-1\*abs(x)))}

print(integrate(f2,-Inf,Inf))

OUTPUT

