R Notebook

exercise3 #1 tmpFn1 <- function(x){ x^(1:length(x)) }

2

tmpFn2 <- function(x){ (x^(1:length(x)))/(1:length(x)) }

tmpFn3 <- function(x,n){ 1+sum(x^(1:n)/(1:n)) }

tmpFn <- function(xVec){ n <- length(xVec) (xVec[-c(n-1:n)] + xVec[-c(1,n)] + xVec[-c(1,2)])/3 }

3

tmpFn <- function(xVec){ ifelse(xVec<0,xVec^2+2*xVec+3,ifelse(xVec<2,xVec+3,xVec^2+4* xVec-7)) }

tmp<-seq(-3,3,len=100) plot(tmp, tmpFn(tmp), type="l")

4

tmp <- function(x){ x[x%%2==1]<-2*x[x%%2==1] x }

5

tmp <- function(x,n){ tmp <- diag(x,nrow<-n,ncol<-n) tmp[abs(col(y)-row(y))==1]<-1 tmp }

6

quadrant<-function(alpha){ floor(alpha/90)%%4+1 }

7

weekday <- function(day, month, year){ month <- month - 2
if(month <= 0) {
month <- month + 12
year <- year - 1 } x <- year%/% 100 year <- year %% 100 tmp <- floor(2.6*month - 0.2) + day + year + year%/%4 + x%/%4 -2* x c("Sunday","Monday","Tuesday","Wednesday","Thursday","Friday","Saturday")[1+tmp%%7]
}

8

testLoop<-function(n){ x<-rep(NA,n-1) x[1]<-1 x2<-2 for (i in 3:n-1){ x[i]<-x[i-1]+2/x[i-1] } x }

testLoop2<-function(yVec){ sum(exp(seq(along=yVec))) }

9

quadmap<-function(start,rho,niter){ x<-rep(NA,niter) x[1]<-start for (i in 1:(niter-1)){ x[i+1]<-rho*x[i]*(1-x[i]) } x }

quadmap2 <- function(start, rho) { x1 <- start x2 <- rho * x1 * (1 - x1) niter <- 1 if(abs(x1-x2) > 0.02) { x1 <- x2 x2 <- rho*x1*(1 - x1) niter <- niter + 1 } niter }

10

tmpFn<-function(xVec){ n<-length(xVec) xmean<-mean(xVec) x<-(xVec-xmean) r1<-sum(x[2:n]*x[1:(n-1)])/sum(x^2) r2<-sum(x[3:n]*x[1:(n-2)])/sum(x^2) list<-(r1 = r1, r2 = r2) }

tmpFnb<-function(x){ xc<-x-mean(x) n<-length(x) tmpFn<-function(j){ sum(xc[(j+1):n]*xc[1:(n-j)])/sum(xc^2) } c(1, sapply(1:k, tmpFn)) } }

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