11.)

#Traffic Volume

#AVerage number of vehicles passing a certain point on a road is

#2 every 30 seconds

lambda<-2

#A)Find the Probability that more than 3 cars will pass the point in 30 seconds

ProbMoreThan3In30Seconds<-1-ppois(3,lambda)

#B)What is the Probability that more than 10 cars pass the point in 360 seconds

ProbMoreThan10In360Seconds<-1-pgamma(1,10,12)

ProbMoreThan10In360Seconds

[1] 0.2423922

ProbMoreThan3In30Seconds

[1] 0.1428765

14.)

#The Lifetime of a engine

#Stnd Devi =3.5

#Mean=10

#No more tha 4% of Engines can be replaced

#Find Largest guarantee period the manufacturer should advertise

LeastPeriod<-qnorm(.04,10,3.5)

statement<-c(PeriodShouldBe = LeastPeriod)

PeriodShouldBe

3.872599