Exercise:

```
setwd('C:\\Users\\vinod\\Desktop\\LABS\\PS\\Lab 07\\IT24104383')
getwd()
> setwd('C:\\Users\\vinod\\Desktop\\LABS\\PS\\Lab 07\\IT24104383')
> getwd()
[1] "C:/Users/vinod/Desktop/LABS/PS/Lab 07/IT24104383"
```

1)

```
#1.
#Uniform Distribution
#X - the number of minutes the train arrives
#min = 0 , max = 40
#p(10<x<25) = p(x<=25) - p(x<=10)
punif(25, min = 0, max = 40, lower.tail = TRUE) - punif(10, min = 0, max = 40, lower.tail = TRUE)

> #1.
> #Uniform Distribution
> #X - the number of minutes the train arrives
> #min = 0 , max = 40
> #p(10<x<25) = p(x<=25) - p(x<=10)
> punif(25, min = 0, max = 40, lower.tail = TRUE) - punif(10, min = 0, max = 40, lower.tail = TRUE)
[1] 0.375
```

2)

```
#2.
#X has a Exponential Distribution
#rate = 0.33
#p(x<=2)
pexp(2, rate = 0.33, lower.tail = TRUE)

> #2.
> #X has a Exponential Distribution
> #rate = 0.33
> #p(x<=2)
> pexp(2, rate = 0.33, lower.tail = TRUE)
[1] 0.4831487
```

3)

i)

```
#3.
#Normal Distribution
#mean = 100 , sd = 15

#i.
#p(x>130)
pnorm(130, mean = 100, sd = 15, lower.tail = FALSE)
> #i.
> #p(x>130)
> pnorm(130, mean = 100, sd = 15, lower.tail = FALSE)
[1] 0.02275013
```

ii)

```
#ii.
#b = 0.95
#p(x<b)
qnorm(0.95, mean = 100, sd = 15, lower.tail = TRUE)
> #ii.
> #b = 0.95
> #p(x<b)
> qnorm(0.95, mean = 100, sd = 15, lower.tail = TRUE)
[1] 124.6728
```