

## Coding :

```
1 options(scipen = 20) #Forcing the program to not use scientific notations
2
3
4 set.seed(277) #Set seed for the randomization as the last 3 digits of my ID to make it unique from my friends
5
6 #solve question Q6-Q10 by using R built-in functions: dnorm(), pnorm(), ...
7
8 q6 <- function(shape, scale, time){
9   1 - pweibull(time, shape, scale) #using pweibull, the built-in function for weibull distribution
10 }
11
12 q7 <- function(alpha, beta, time){
13   1 - pbeta(time, alpha, beta) #using pbeta, the built-in function for beta distribution
14 }
15
16 q8 <- function(mean, time){
17   pexp(time, mean) #using pexp, the built-in function for exponential distribution
18 }
19
20 q9 <- function(mean, sd, time){
21   pnorm(time, mean, sd) #using pnorm, the built-in function for normal distribution
22 }
23
24 q10 <- function(theta, omega, time){
25   1 - plnorm(time, theta, omega) #using plnorm, the built-in function for lognormal distribution
26 }
27
28
29
30 q6(1, 300, 240)
31 q7(2, 3, 0.8)
32 q8(1/6, 3)
33 q9(7000, 600, 5800)
34 q10(0.5, 1, 10)
```

## Results :

```
> q6(1, 300, 240)
[1] 0.449329
> q7(2, 3, 0.8)
[1] 0.0272
> q8(1/6, 3)
[1] 0.3934693
> q9(7000, 600, 5800)
[1] 0.02275013
> q10(0.5, 1, 10)
[1] 0.0357267
```

## Conclusion :

Here, I used the pweibull, pbeta, pexp, pnorm and plnorm to calculate the result from quiz5 q6-q10. The answers I got were the same as the results from calculating by hand.