Monte Carlo Confirmation for 3.10.4 in R

```
Fy <- function(y) {y^2}
X <- function (U) {sqrt(U)}

# Desired number of samples:
N = 1000

# position counter
i = 0

# Contains .6 Counter
x = 0

while( i < N )
{
        U = runif(5)
        y = X(U)
        y = sort(y)
        if ((y[1]<.6) & (y[5] > .6)){
          x = x+1
        }
        i = i+1
}
Probability = x / N
```

I ran this 1000 sample simulation about 5 times, below are my outputs and they confirm my answer in 3.10.4

Output:

1. Probability = .873
2. Probability = .893
3. Probability = .885
4. Probability = .890
5. Probability = .895

Avg. of these 5 probabilities = .8872

Monte Carlo Confirmation for 3.10.4 in R

```
Fy <- function(y) {1 - exp(-y)}
X <- function(U){-log(1-U)}

# Desired number of samples:
N = 1000

# position counter
i = 0

# Contains .6 Counter
x = 0

while( i < N )
{
        U = runif(12)
        y = X(U)
        y = sort(y)
        if ((y[1]<.2)){
          x = x+1
        }
        i = i+1
}

Probability = x / N
```

I ran this 1000 sample simulation about 5 times, below are my outputs and they confirm my answer in 3.10.6

Output:

1. Probability = .905
2. Probability = .914
3. Probability = .917
4. Probability = .908
5. Probability = .907

As you can see all the times, the probability of P[Y_1 <.2] >= 90% with n = 12.