> # HW1

> # Wenhui Yang

>

> # question 1

> num <- 0

> for (i in 1 : 1000)

+ a <- rnorm(1,0,1)

> print(a)

[1] -1.389803

> a > 1.96

[1] FALSE

> a < -1.96

[1] FALSE

> num <- sum(rnorm(1000,0,1))

> print(num)

[1] -26.78841

> num > 1.96

[1] FALSE

> num < -1.96

[1] TRUE

> num/1000

[1] -0.02678841

>

> # question 2

> reject <- 0

> for (i in 1 : 1000)

+ x <- round(runif(100,0,1))

> x\_bar <- mean(x)

> se\_x <- sd(x)

> t\_value <- se\_x/sqrt(100)

> print(t\_value)

[1] 0.0496045

> t\_value > -1.96 & t\_value < 1.96

[1] TRUE

> reject <- sum(round(runif(1000,0,1)))

> print(reject/1000)

[1] 0.517