> plot(mtcars$wt, mtcars$mpg)

> x <- mtcars$wt

> y <- mtcars$mpg

> reg <- lm(y~x)

> abline(lm(reg))

> bhat <- reg$coefficients[2]

> n <- nrow(mtcars)

> num <- sum(((x - mean(x))^2)\*(reg$residuals^2))/n

> den <- sum((x - mean(x))^2)/(n-1)

> se <- sqrt(num)/den

> t <- sqrt(n)\*bhat / se

> B <- 999

> bstar <- rep(NA, B)

> tstar <- rep(NA, B)

> for (b in 1: B) {

+ index <- sample(1:32, 32, replace=TRUE)

+ X <- x[index]

+ Y <- y[index]

+ reg <- lm(Y~X)

+ bstar[b] <- reg$coefficients[2]

+ n <- nrow(mtcars)

+ num <- sum(((X - mean(X))^2)\*(reg$residuals^2))/n

+ den <- sum((X - mean(X))^2)/(n-1)

+ se <- sqrt(num)/den

+ tstar[b] <- sqrt(n)\*(bstar[b]-bhat) / se

+ }

> tstar <- sort(tstar, decreasing = TRUE)

> tstar[975]

[1] -2.410697

> tstar[25]

[1] 2.261303

> t

x

-8.705799

> tstar[975] < t

x

FALSE

> tstar[25] > t

x

TRUE