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Bryan Greener

Jason Gunderson

Chad Hirsch

Workshop 6.68, 6.71

**6.68**

Code

#6.68

u=8.9

sigma=2.5

xbar=10.2

n=6

# Test H0: U= 8.9, Ha: U>8.9

z=(xbar-u)/(sigma/sqrt(n))

z

pvalue=pnorm(-abs(z))

Answer

Pvalue = 0.1013787 = 10.14%

**6.71**

a)

H0 and Ha are going to be 0.

b)

Code

mpg=c(5,6.5,-0.6,1.7,3.7,4.5,8,2.2,4.9,3,

4.4,0.1,3,1.1,1.1,5,2.1,3.7,-0.6,-4.2)

n=20

sigma=3

u=0

z=(mean(mpg)-u)/(sigma/sqrt(n))

z

pvalue=2\*pnorm(-abs(z))

pvalue

Answer

Pvalue = 4.708509e-05

We reject H0 because it is much smaller than 0.05. This implies the mean number of mpg calculations is greater than 2.73.