# Question 6

A screenshot of a cell phone

Description automatically generated

Height = c(63.75,68.25,62.25,67.25,64.75,67.5,64.75,66.5,68.5,64.25,64.5,66,65.25,64.75,67.5) Age = c("20-29","20-29","20-29","20-29","30-39","30-39","30-39","30-39","40-49","40-49","40-49","40-49","50-59","50-59","50-59")

data = data.frame(Age,Height) height = split(data,data$Age) one = height$'20-29' library(lattice) H = sort(Height) histogram(~H|Age,layout=c(1,4),data=data) boxplot(Height~Age, ylab="Height", xlab="Age", main = "Height grouped by Age", col = c("Red","Green","Blue","Yellow")) qqnorm(data$Height,ylab="Height", xlab="Normal", main="Normal Probability plot") qqline(data$Height) kruskal.test(Height ~ Age, data) res.aov2 = aov(Height ~ Age,data = data)

summary(res.aov2)

TukeyHSD(res.aov2)

Kruskal-Wallis rank sum test

data: Height by Age

Kruskal-Wallis chi-squared = 0.39835, df = 3, p-value = 0.9406

Df Sum Sq Mean Sq F value Pr(>F)

Age 3 0.64 0.215 0.052 0.984

Residuals 11 45.46 4.133

Tukey multiple comparisons of means

95% family-wise confidence level

Fit: aov(formula = Height ~ Age, data = data)

$Age

diff lwr upr p adj

30-39-20-29 0.50000000 -3.826349 4.826349 0.9847774

40-49-20-29 0.43750000 -3.888849 4.763849 0.9896658

50-59-20-29 0.45833333 -4.214658 5.131324 0.9905467

40-49-30-39 -0.06250000 -4.388849 4.263849 0.9999685

50-59-30-39 -0.04166667 -4.714658 4.631324 0.9999926

50-59-40-49 0.02083333 -4.652158 4.693824 0.9999991

I will the Kruskal wallis rank sum test. All the values are mentioned above.

**Null hypothesis:** Null hypothesis assumes that the Height (groups) are from identical populations.

A close up of a map

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A picture containing screenshot

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