**ASSIGNMENT 6**

**> #q1**

> x=c(17,15,20,20,32,28,12,26,25,25,35,24)

> wilcox.test(x,alternative="greater",mu=20)

Wilcoxon signed rank test with continuity correction

data: x

V = 42.5, p-value = 0.06906

alternative hypothesis: true location is greater than 20

> #p>alpha. accept Ho

**#q2**

> x=c(612,619,631,628,643,640,655,649,670,663)

> SIGN.test(x,md=625,alternative="greater",conf.level = 0.95)

One-sample Sign-Test

data: x

s = 8, p-value = 0.05469

alternative hypothesis: true median is greater than 625

95 percent confidence interval:

627.04 Inf

sample estimates:

median of x

641.5

Achieved and Interpolated Confidence Intervals:

Conf.Level L.E.pt U.E.pt

Lower Achieved CI 0.9453 628.00 Inf

Interpolated CI 0.9500 627.04 Inf

Upper Achieved CI 0.9893 619.00 Inf

>#conclusion:p>alpha, median is 625

**> #q3**

> x=c(1.5, 2.2, 0.9, 1.3, 2.0, 1.6, 1.8, 1.5, 2.0, 1.2, 1.7)

> wilcox.test(x,mu=1.8)

Wilcoxon signed rank test with continuity correction

data: x

V = 13, p-value = 0.1522

alternative hypothesis: true location is not equal to 1.8

> #p>alpha. accept Ho

**#q4**

> x=c(25, 19, 38, 52, 57, 39, 46, 46, 30, 49, 27, 39, 44, 63, 31, 67, 42)

> SIGN.test(x,md=41,alternative="two.sided",conf.level = 0.95)

One-sample Sign-Test

data: x

s = 9, p-value = 1

alternative hypothesis: true median is not equal to 41

95 percent confidence interval:

31.07104 48.96955

sample estimates:

median of x

42

Achieved and Interpolated Confidence Intervals:

Conf.Level L.E.pt U.E.pt

Lower Achieved CI 0.8565 38.000 46.0000

Interpolated CI 0.9500 31.071 48.9696

Upper Achieved CI 0.9510 31.000 49.0000

#p>alpha, accept mode

**#q5**

> y=c(700, 650, 800, 975, 855, 785, 759, 640, 950, 715, 825, 980, 895, 1025, 850, 915, 740, 985, 770, 785, 700, 925)

> SIGN.test(y,md=700,conf.level = 0.90)

One-sample Sign-Test

data: y

s = 18, p-value = 0.0004025

alternative hypothesis: true median is not equal to 700

90 percent confidence interval:

765.4280 903.3128

sample estimates:

median of x

812.5

Achieved and Interpolated Confidence Intervals:

Conf.Level L.E.pt U.E.pt

Lower Achieved CI 0.8662 770.000 895.0000

Interpolated CI 0.9000 765.428 903.3128

Upper Achieved CI 0.9475 759.000 915.0000

#p<alpha, reject Ho