Unit 2 Live session ppt SAS code

\*Beachcomber example;

data critval;

p = quantile ("T", 1-(0.05/2), 7-1);

run;

proc print data = critval;

run;

data comber;

input age @@;

datalines;

25 19 37 29 40 28 31

;

run;

proc print data = comber ;

run;

\*two sided t-test;

proc ttest data = comber h0=21 sides = 2 alpha =0.05;

run;

\*one-sided t-test;

proc ttest data = comber h0=24 sides = upper alpha =0.05;

run;

data mycritval;

p = quantile ("T", 1-(0.05), 7-1);

run;

proc print data = mycritval;

run;

\*Two sided CI that does NOT go with one sided test;

proc ttest data = comber h0=24 sides =2 alpha =0.05;

run;

\*Two sided CI to go with one sided test;

proc ttest data = comber h0=24 sides =2 alpha =0.1;

run;

data creativity;

input treatment score; /\* 1 is extrinsic and 0 is intrinsic\*/

datalines;

1 5

1 5.4

1 6.1

1 10.9

1 11.8

1 12

1 12.3

1 14.8

1 15

1 16.8

1 17.2

1 17.2

1 17.4

1 17.5

1 18.5

1 18.7

1 18.7

1 19.2

1 19.5

1 20.7

1 21.2

1 22.1

1 24

0 12

0 12

0 12.9

0 13.6

0 16.6

0 17.2

0 17.5

0 18.2

0 19.1

0 19.3

0 19.8

0 20.3

0 20.5

0 20.6

0 21.3

0 21.6

0 22.1

0 22.2

0 22.6

0 23.1

0 24

0 24.3

0 26.7

0 29.7

;

proc print data = creativity;

run;

proc sort data = creativity;

by treatment;

run;

proc print data = creativity;

run;

/\* Descriptive Statistics \*/

proc univariate data = creativity;

by treatment;

run;

/\* critical values \*/

data critval;

cv = quantile("T", .975, 45); /\* alpha = .05 two sided test ... gives 95% CI \*/

proc print data = critval;

run;

proc ttest data = creativity sides = 2 alpha = .05;

class treatment;

var score;

run;

\*to find the sample size required for a desired power;

proc power;

onesamplemeans

sides = u

mean = 4.3

nullmean = 4

stddev = 1.2

ntotal = .

power = .8 .7 .6

;

plot x = effect min = 4 max =5.5;

run;

proc power;

twosamplemeans

meandiff = 5

stddev = 24.03

ntotal = .

power = .8 .7 .6;

plot x = effect min =4 max = 8;

run;