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Computation Statistic – IUP

Quiz – 11/5/22

Number 1

```
MTB > % "C:\Users\darre\Documents\Macro Minitab\W13_Quiz_No1.txt" c1 c2 0 0.05
Executing from file: C:\Users\darre\Documents\Macro Minitab\W13_Quiz_No1.txt
Hypotesis:
H0 : mu0 = 0
H1 : mu0 <> 0
```

Data Display

```
t       3,34436
ttab    2,16037

Reject H0. mu0 not equal 0
```

Data Display

```
pvalue    0,00527768
alpha     0,0500000

Reject H0. mu0 not equal 0
```

Data Display

```
BB    0,128461
BA    0,597254

Reject H0. mu0 not equal 0
```

Number 2

```
MTB > %"C:\Users\darre\Documents\Macro Minitab\W13_Quiz_No2.txt" c1 c2 81 298
0.1089 0.0975 0.05
Executing from file: C:\Users\darre\Documents\Macro Minitab\W13_Quiz_No2.txt
Hypotesis:
H0 : p1 = p2
H1 : p1 <> p2
```

Data Display

```
z       0,930463
ztab    1,95996

Fail to Reject H0, p1 equal p2
```

Data Display

```
pvalue    0,352132
alpha     0,0500000

Fail to Reject H0, p1 equal p2
```

Number 3

MTB > OneWay;
SUBC>   Response 'Working Class' 'Professional (middle incomes)' &
CONT>   'Professional (wealthy)';
SUBC> IType 0;
SUBC> GMCI;
SUBC> GIntPlot;
SUBC> TMethod;
SUBC> TFactor;
SUBC> TANOVA;
SUBC> TSummary;
SUBC> TMeans;
SUBC> Nodefault.

One-way ANOVA: Working Class; Professional (middle incomes); Professional (wealthy)
Method
Null hypothesis   All means are equal
Alternative hypothesis At least one mean is different
Significance level $\alpha = 0,05$
Equal variances were assumed for the analysis.

Factor Information
Factor Levels Values
Factor   3 Working Class; Professional (middle incomes); Professional (wealthy)

Analysis of Variance
Source DF Adj SS Adj MS F-Value P-Value
Factor 2   3034   1516,9   9,10   0,001
Error   21 3501   166,7
Total   23 6535

Model Summary
    S   R-sq R-sq(adj) R-sq(pred)
12,9116 46,43%   41,32%   30,03%

Means
Factor   N   Mean StDev   95% CI
Working Class   8 35,81 19,98 (26,32; 45,31)
Professional (middle incomes) 8 11,89 6,66 (2,39; 21,38)
Professional (wealthy)   8 12,04 7,51 (2,54; 21,53)
Pooled StDev = 12,9116

Interval Plot of Working Clas; Professional; ...
MTB > Stop.

Pvalue(0,001) < alpha(0,05) we reject H0 which means that there are at least one mean that are different

Number 4

```
MTB > %"C:\Users\darre\Documents\Macro Minitab\W13_Quiz_No4.txt" c1 c2 c3
Executing from file: C:\Users\darre\Documents\Macro Minitab\W13_Quiz_No4.txt
Hydrogen = x
Porosity = y
Strength = z
```

Data Display

```
covxx    0,000725824
covyy    0,0451297
covzz    0,109634
covxy    0,00357582
covxz    -0,00704849
covyz    -0,0371006
```