Untitled

2024-03-28

```
level <- c(rep(1,5), rep(2,5), rep(3,5))
a <- c(49,73,58,38,42,31,40,43,44,20,46,41,58,31,65)
table <- cbind(level, a)
table <- data.frame(table)
```

분산분석표

```
aov1 <- aov(a~level)
summary(aov1)
```

```
##             Df Sum Sq Mean Sq F value Pr(>F)
## level        1   36.1    36.1   0.179  0.679
## Residuals   13 2622.8   201.8
```

```
out1 = lm(a~con1+con2, data = table)
summary(out1)
```

```
##
## Call:
## lm(formula = a ~ con1 + con2, data = table)
##
## Residuals:
##    Min     1Q Median     3Q    Max
##  -17.2   -8.6   -2.2    7.9   21.0
##
## Coefficients:
##             Estimate Std. Error t value Pr(>|t|)
## (Intercept)   45.267      3.268  13.853 9.62e-09 ***
## con1          -1.900      4.002  -0.475   0.6435
## con2          -4.833      2.311  -2.092   0.0584 .
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
## Residual standard error: 12.66 on 12 degrees of freedom
## Multiple R-squared:  0.2772, Adjusted R-squared:  0.1567
## F-statistic: 2.301 on 2 and 12 DF,  p-value: 0.1427
```

중회귀분석의 분산분석표

```
out2 <- aov(out1)
summary(out2)
```

```
##             Df Sum Sq Mean Sq F value Pr(>F)
## con1         1   36.1    36.1   0.225 0.6435
## con2         1  700.8   700.8   4.376 0.0584 .
## Residuals   12 1922.0   160.2
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
```

검정결과가 동일하다.

순서

```
out3 = lm(a~con2+con1, data = table)
out4 <- aov(out3)
summary(out4)
```

```
##             Df Sum Sq Mean Sq F value Pr(>F)
## con2         1  700.8   700.8   4.376 0.0584 .
## con1         1   36.1    36.1   0.225 0.6435
## Residuals   12 1922.0   160.2
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
```

순서에 상관이 없이 동일하다.