

fat absorbed

1 65
1 73
1 69
1 78
1 57
1 96
2 78
2 91
2 97
2 82
2 85
2 77
3 75
3 93
3 78
3 71
3 63
3 76
4 55
4 66
4 49
4 64
4 70
4 68

R code:

#read in data

> dn=read.table("doughnut.txt",header=TRUE)

>attach(dn) #from here on we can use these variable names

#to perform and F-test

> oneway.test(absorbed~fat,var.equal=TRUE)

One-way analysis of means

data: absorbed and fat

F = 5.3518, num df = 3, denom df = 20, p-value = 0.007178

#to get a p-value for the F distribution and degrees of freedom:

> 1-pf(5.35,3,20)

0.00718805

```
#to construct the ANOVA table:  
> anova(lm(absorbed~factor(fat)))
```

Analysis of Variance Table

Response: absorbed

	Df	Sum Sq	Mean Sq	F value	Pr(>F)
factor(fat)	3	1620.0	540.0	5.3518	0.007178 **
Residuals	20	2018.0	100.9		

Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1