Chapter 4 of
Data Analysis for Experimental Design

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August 7, 2009

1   Table 4.3

The R command for a two-sample t test is given by the *t.test* command. The command has several arguments, which specify the confidence level (e.g., 95%, 99%), whether the test is a two-sample t test or a paired test, and whether the variances are assumed to be equal.

The data file is organized as follows:

```
1 12
1  6
1  7
1 12
1 10
1 16
1 13
1 14
1  9
1 14
1  6
1 16
1 13
1 10
1  7
1 10
1 12
1 11
1  9
1 13
```

```
2  4
2 12
2  9
2  9
2 14
2  9
2 11
2  0
2  9
2 11
2  1
2  8
2 10
2  8
2  6
2  8
2  9
2  9
2 10
2  3
```

```
data <- read.table("PATHTODATAFILE\\data41.dat")
colnames(data) <- c("group", "dv")
attach(data)
t.test(dv[group==1], dv[group==2], paired=FALSE, conf.level=.99, var.equal=TRUE)
```

```
        Two Sample t-test

data:  dv[group == 1] and dv[group == 2]
t = 2.8604, df = 38, p-value = 0.006839
alternative hypothesis: true difference in means is not equal to 0
99 percent confidence interval:
 0.1560944 5.8439056
sample estimates:
mean of x mean of y
      11        8
```