



## TI-84 One-Way ANOVA Tests

The TI-84 can calculate one-way ANOVA.

Begin by entering the data in the Lists in the calculator. You will find these by pressing  and then selecting Edit... Then enter the data into the list. Use one list for each type of treatment. The data we're testing in the example has 4 treatments, with uneven numbers of data for each treatment.

	L1	L2	L3	L4
1:Edit...	59.5	55.2	51.7	44.6
2:SortA(	53.3	59.1	48.8	48.5
3:SortD(	56.8	52.8	53.9	41
4:ClrList	36.1	54.5	49	47.3
5:SetUpEditor	---	---	---	46.1
	L1(5)=58.7			L4(1)=44.6



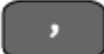




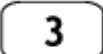
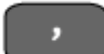
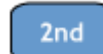
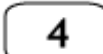
When the data is entered into the calculator, EXIT and then select  and TESTS. **ANOVA(** is #H on this list. Scroll up to get to the bottom of the list. The syntax for the **ANOVA** function is to enter the lists, separated by commas, where the data for the test can be found.

```

EDIT CALC TESTS
B:2-PropZInt...
C:X²-Test...
D:X²GOF-Test...
E:2-SampFTest...
F:LinRegTTest...
G:LinRegInt...
H:ANOVA(

```

Since we have 4 treatments, we need to list all 4 lists. After selecting **ANOVA(** from the Tests list,

  to get L<sub>1</sub>, comma ,   for L<sub>2</sub>, comma ,   for L<sub>3</sub>, comma ,   for L<sub>4</sub>, then close the parentheses. The syntax is shown in the screen capture.

When you hit  at this point, the results of the test come up.

```

One-way ANOVA
F=2.569846608
P=.0959043454
Factor
df=3
SS=246.384778
MS=82.1282593

```

```

One-way ANOVA
MS=82.1282593
Error
df=14
SS=447.418
MS=31.9584286
SxP=5.65317863

```

The test results run onto a second screen, so you will need to scroll to see the full results.

The ANOVA uses the F test statistic, but it provides the P-value for you in the test results. Compare this information to  $\alpha$  to determine

whether to accept or reject the null hypothesis  $H_0$ .

The TI-84 cannot do Two-Way ANOVA, though you might be able to find programs to can download from TI that can perform the test.

**ANOVA(lists)**