

A Test for Normality

Section 10.2 The Ryan-Joiner Test

H_0 : The Sample is Drawn from a normal population

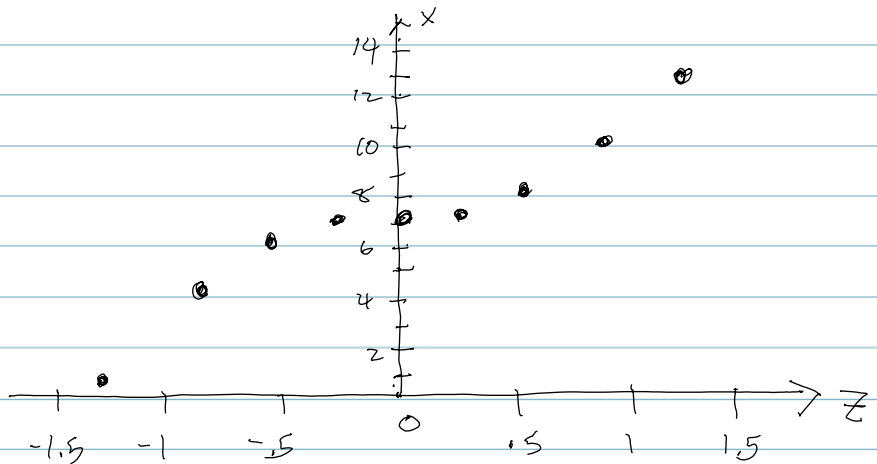
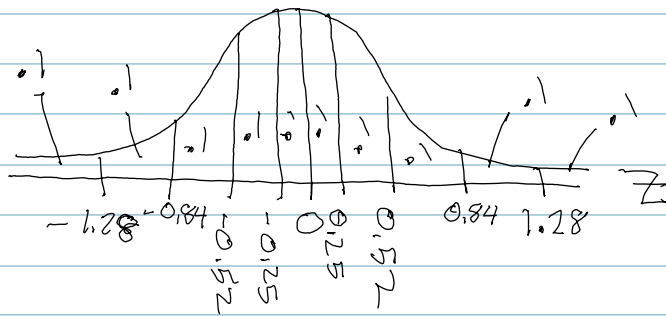
H_1 : The pop. is not normal.

Sample: $\{1, 4, 6, 7, 7, 7, 8, 10, 13\}$

A perfect Normal sample

is this drawn from a normal pop?
 (we'll sort the data set first.)

Z	f.
-1.28	1
-0.84	4
-0.52	6
-0.25	7
0	7
0.25	7
0.52	8
0.84	10
1.28	13



If these are distributed the same the scatterplot of these will be ~~normal~~ straight.

Compute r to measure the straightness.

$$r = .966$$

From Table A6 we can get a critical value. If $r < C.V.$ we reject H_0 .

$\alpha = .01 \rightarrow C.V. : .872$ so $r > C.V.$ fail to reject H_0 .

The data don't allow us to reject the assumption of normality.