

12.5: Critical Values for Grubb's Test

The following table provides critical values for $G(\alpha, n)$, where α is the probability of incorrectly rejecting the suspected outlier and n is the number of samples in the data set. There are several versions of Grubb's Test, each of which calculates a value for G_{ij} where i is the number of suspected outliers on one end of the data set and j is the number of suspected outliers on the opposite end of the data set. The critical values for G given here are for a single outlier, G_{10} , where

$$G_{\text{exp}} = G_{10} = \frac{|X_{\text{out}} - \bar{X}|}{s}$$

The suspected outlier is rejected if G_{exp} is greater than $G(\alpha, n)$.

Table 12.5.1: Critical Values for the Grubb's Test

$\frac{\alpha \rightarrow}{n \downarrow}$	0.05	0.01
3	1.155	1.155
4	1.481	1.496
5	1.715	1.764
6	1.887	1.973
7	2.202	2.139
8	2.126	2.274
9	2.215	2.387
10	2.290	2.482
11	2.355	2.564
12	2.412	2.636
13	2.462	2.699
14	2.507	2.755
15	2.549	2.755

12.5: Critical Values for Grubb's Test is shared under a [CC BY-NC-SA 4.0](https://creativecommons.org/licenses/by-nc-sa/4.0/) license and was authored, remixed, and/or curated by LibreTexts.