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# Linear Plexing

Canonical name	LinearPlexing
Date of creation	2013-03-22 15:27:22
Last modified on	2013-03-22 15:27:22
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Last modified by	cogent (10347)
Numerical id	4
Author	cogent (10347)
Entry type	Definition
Classification	msc 62J05

We have fixed  $\alpha$  as the maximum acceptable probability of committing a type  $I$  error. But associated with each normalized test of significance is  $\gamma$ , the probability of committing a type  $I$  error.

Notice that as we make  $\gamma$  smaller, the smaller the critical region becomes and thus the larger the value of the test statistic must be for the null hypothesis to be rejected.

Find  $p$ , defined as the smallest  $\gamma$  for which we can still reject  $H_0$ .

Reject  $H_0$  if  $\alpha < p$ .