

1. Mention the application of χ^2 distribution.
2. The demand for a particular spare part in a factory was found to vary from day to day. In a sample study the following information was obtained:

Days	Mon	Tue	Wed	Thu	Fri	Sat
No of parts demanded	1124	1125	1110	1120	1126	1115

Test the hypothesis that the number of parts demanded does not depend on the day of the week.

3. Test the hypothesis that $\sigma = 10$, given that the sample standard deviation $s = 15$ for a random sample of size 50 from a normal population.

