

10 In the past, the time spent in minutes, by customers in a certain library had mean 32.5 and standard deviation 8.2.

Following a change of layout in the library, the mean time spent in the library by a random sample of 50 customers is found to be 34.5 minutes.

Assuming that the standard deviation remains at 8.2, test at the 5% significance level whether the mean time spent by customers in the library has changed. [7]