

# [Statistics for managers individual work2 wk6](https://assignbuster.com/statistics-for-managers-individual-work2-wk6/)

[Business](https://assignbuster.com/essay-subjects/business/)

Statistics for Managers of the 27, 02 Formulate and present the rationale for a hypothesis test that Par coulduse to compare the driving distances of the current and new golf balls?
Steps for hypothesis testing VARIANCE in Par, Inc. Model:
i. Stating the null hypothesis:
H0: σ 12= σ22
Ha: σ12≠σ22
ii. The number of populations for each subject?
n1 = 40, n2 = 40,
iii. The alpha
Alpha is 0. 05/2 = 0. 025
iv. Is the population or sample variation measure given?
σ 12= 76. 61474
σ 22=  97. 94872
F Test: Two-Sample for Variances (testing for variances):
Inter-ratio data
Two populations
Normal Distribution
Interdependent random sample(s)
Therefore, we are going to proceed with t Test with Two-Samples assuming equal variances
To estimate the proportions of the current and new models, we use f-t test sample for two variances (Sawilowsky, 2002).
From the F-test results, p value = 0. 2222, (p> 0. 05)
F
0. 782192
P(F F-critical, the differences in variance between the two models are not-statistically different. We proceed to perform the t-test while assuming equal variances.
Fail to reject the null hypothesis (not in tails)
H0: σ12= σ22 ; we think variances are equal but not convinced variances are equal
Steps for hypothesis testing for Means in Par, Inc. model:
v. The alpha
Alpha is 0. 05/2 = 0. 025
vi. Is the population or sample variation measure given?
Ho:  µ1 (current) = µ2 (new)
Ha: µ1 ≠ µ2
vii. Find value t-stat.
Df
78
t-stat
1. 328362
P(T