

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

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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