

Mutation with Penalty Function  
F-Test Two-Sample for Variances

Flip      Move

	<i>Variable 1</i>	<i>Variable 2</i>
Mean	-138.129	-17.9083
Variance	75.58576	1.681939
Observations	240	240
df	239	239
F	44.93966	
P(F<=f) one-tail	4E-130	
F Critical one-tail	1.237654	

$M(1) < M(2)$  and  $F > F \text{ Critical} \Rightarrow \text{Equal}$

t-Test: Two-Sample Assuming Equal Variances

	<i>Variable 1</i>	<i>Variable 2</i>
Mean	-138.129	-17.9083
Variance	75.58576	1.681939
Observations	240	240
Pooled Variance	38.63385	
Hypothesized Mean Difference	0	
df	478	
t Stat	-211.878	
P(T<=t) one-tail	0	
t Critical one-tail	1.648048	
P(T<=t) two-tail	0	
t Critical two-tail	1.964939	

$t \text{ Stat} < t \text{ Critical} \Rightarrow \text{No significant Difference}$