

(8 points; 8 minutes)

12. The General Mills company is experimenting with different amounts of flour, sugar, salt, and shortening for a new cake mix. Their expert cooks have eight different experimental recipes. The cooks use these recipes to make a total of 29 cakes. After baking, the "firmness" of each cake is measured. Use the data from this experiment to test the claim that all of the recipes produce cakes with the same average firmness. (Use $\alpha = 0.025$.)

		Firmness of Cakes Made with Recipe #							
		1	2	3	4	5	6	7	8
		13.8	11.8	18.8	16.2	8.6	15.2	17	12.9
		13.9	14.2	13.8	14.5	14.9	13.3	17.2	17
		15.5	13.6	17.5		12.4	14.4	14.9	14.4
		14.1	11.8	14.4		14.7		16.1	15.5
Mean		14.325	12.85	16.125	15.35	12.65	14.3	16.3	14.95
St.Dev.		0.7932	1.2369	2.4102	1.2021	2.9286	0.9539	1.0488	1.733
n		4	4	4	2	4	3	4	4

Complete the Analysis of Variance Table and test the claim.

Source	Sum of Squares	df	Mean Square	F
Recipes			7.2108	
Error	65.21			
Total				

Claim: _____

H₀: _____

H₁: _____