

20. A study of 6 different weight loss programs involved 120 subjects. Each of the 6 programs had 20 subjects in it. The subjects were followed for 12 months. Weight change for each subject was recorded. We want to test the claim that the mean weight loss is the same for the 6 programs.

- (a) Complete the following ANOVA table with sum of squares, degrees of freedom, and mean square (*Show all work*):

Source of Variation	Sum of Squares (SS)	Degrees of Freedom (df)	Mean Square (MS)
Factor (Between)	27.50		
Error (Within)			
Total	534.50	119	N/A

- (b) Determine the test statistic. *Show all work; writing the correct test statistic, without supporting work, will receive no credit.*
- (c) Determine the P-value. *Show all work; writing the correct P-value, without supporting work, will receive no credit.*
- (d) Is there sufficient evidence to support the claim that the mean weight loss is the same for the 6 programs at the significance level of 0.05? Explain.