

ANOVA in-class exercise

1. Please conduct ANOVA analysis of the following data

Here is some hypothetical data with a small enough N to keep your calculations fairly simple. Imagine a sample of 12 teenagers from three high schools—Washington, Adams, and Jefferson. Here are the school each teenager attends and the number of school days missed during a school year.

<u>School Attended</u>	<u>Number of Days Missed</u>
Washington	6
Washington	5
Washington	7
Adams	5
Adams	4
Adams	6
Adams	5
Jefferson	2
Jefferson	1
Jefferson	3
Jefferson	1
Jefferson	3

2. for the following data, please conduct ANOVA analysis

A dean of students randomly selects 16 students, asking each a series of questions that measure students' "school spirit" on a scale from 1 to 10. Here are the total school spirit scores of these 16 students:

First-Years		Sophomores		Juniors		Seniors	
Name	Score	Name	Score	Name	Score	Name	Score
Alfie	6	Eddie	5	Iggy	4	Mannie	7
Betty	3	Frannie	5	Jackie	3	Nellie	4
Charlie	6	Gigi	2	Kelly	5	Ollie	7
Deedee	5	Hildi	4	Louie	4	Pepe	6

3. Please create and complete the ANOVA table for the following data

Here are the estimated hours spent studying on a typical day of five high school students in each of three types of places:

Place of Residence		
Rural	Suburban	Urban
1	3	2
3	1	1
0	3	0
1	3	4
0	5	3

4. for the following data, please complete the ANOVA table

A General Social Survey asked 1465 respondents how much they liked rap music. Liking of rap music was measured on a five-point scale ranging from 1 (like it very much) to 5 (dislike it very much). These are the mean rap scores and Ns for type of community in which respondent lives:

Type of Community	Mean	N
Big City	3.773	256
Suburbs	3.909	395
Small City	3.930	572
Village	4.400	55
Country	4.011	187

Sum of square	Sum of square	df	MSS	F	E ²
Between					
Within	1811.960				
total					