

11.3 PROJECT

AVERAGES AND OUTLIERS BETWEEN FRIENDS

Suppose two competitive friends, Student A and Student B, are both finishing up a course on technical writing at different colleges. At the end of the semester, they compare their grades to see who did better in this course. Each friend had to complete a different number of graded assignments and exams, where each grade was given equal weight. The grades earned by the two students on all graded assignments and exams are as follows.

Student A: 78, 89, 95, 64, 98, 0, 87, 84, 76, 93, 89, 77, 61

Student B: 87, 79, 88, 91, 89, 77, 86, 93, 105, 89

In this project, you will use the skills learned in Section 11.3 to determine which friend earned the higher grade in the technical writing course.

1. For each set of grades, determine the mean, median, mode, range, and standard deviation. Round the answers to the nearest tenth, if necessary.

Comparison of Students' Grades

	Student A	Student B
Mean		
Median		
Mode		
Range		
Standard Deviation		

2. Compare the grades of the two students. Which value(s) did you use in your comparison? Explain your reasoning.
3. Determine which value(s) in each student's grades are outliers and remove the outlier(s) from the data sets. Explain why each data point you removed is an outlier.
4. For each modified data set, determine the mean, median, mode, range, and standard deviation. Round the answers to the nearest tenth, if necessary.

Comparison of Students' Grades with Outliers Removed

	Student A	Student B
Mean		
Median		
Mode		
Range		
Standard Deviation		

5. Do these new values change your mind of which student performed better in the technical writing course? Explain why or why not.
6. Do you think outliers should be removed when comparing grades between students? Explain your reasoning.