Suppose you are investigating the effectiveness of a new teaching method. You collect data on the scores of two groups of students, one taught with the traditional method and the other with the new method. Additionally, you collect data on the same group of students before and after the teaching intervention. Here are the scores:

**INDEPENDENT SAMPLES:**

**Group1: (Traditional Method)**

**Scores: 75, 80, 85, 78, 82**

**Group2: (New Method)**

**Scores: 88, 92, 89, 85, 90**

***Perform an independent sample t-test to determine if there is a significant difference in the scores between the two teaching methods.***

**Paired Samples:**

**Before and After Scores (Same Group)**

**Before: 65, 70, 72, 68, 71**

**After: 75, 78, 80, 76, 79**

***Perform a paired sample t- test to investigate if there is a significant difference in scores before and after the teaching intervention.***