2023 AP Daily: Practice Sessions
AP Statistics
Session 6 – FRQ (Part A: Inference)

1. A survey conducted by a national research center asked a random sample of 920 teenagers in the United States how often they use a video streaming service. From the sample, 59% answered that they use a video streaming service every day.

   a. Construct and interpret a 95% confidence interval for the proportion of all teenagers in the United States who would respond that they use a video streaming service every day.

   b. Based on the confidence interval in part (a), do the sample data provide convincing statistical evidence that the proportion of all teenagers in the United States who would respond that they use a video streaming service every day is not 0.5? Justify your answer.

	Mean	Standard Deviation	Sample Size
Standard care	0.57	0.26	56
New treatment	0.69	0.27	56

2. Patients experiencing symptoms of a heart attack are routinely transported to a hospital in an ambulance. In a study of a new treatment thought to reduce damage to the heart, patients experiencing symptoms of a heart attack were randomly assigned to one of two groups. During transportation to the hospital, patients in one group received standard care, and patients in the other group received the new treatment consisting of standard care and the application of a blood pressure cuff.

   The response variable measured for each patient was a number between 0 and 1, referred to as the myocardial salvage index (MSI). A higher MSI value indicates a more positive outcome for the patient. Summary statistics for the MSI responses of the two groups are shown in the table.

   Do the data provide convincing statistical evidence that the new treatment results in a higher mean MSI value than does the standard care among people similar to the patients in the study?