Name(s)

Elise A. Kimball

Project Number

S1612

Project Title

Fast Fourier Transform Algorithm Analysis of the A 440 Frequency to Determine Violin Tone Quality

Abstract

Objectives/Goals
Fifty violins were tested to determine which group had the best tone through LabPro graphing software.

Methods/Materials
The variables were price ($500-$1,000, $4,000-$12,000, and over $20,000), age (less than 50 years, 50-100 years, and over 100 years), and country of origin (USA, China, Germany, Italy, and France).

Results
For price the meduim and high priced violins had the best quality tone. The old violins had the best tone, and the French vioins produced the best quality tone.

Summary Statement

Violin sound quality was tested using fast fourier transform algorithm computer analysis.

Help Received

Dad helped record data on computer. Mom helped with the board. School supplied LabPro graphing software and mic. Violins provided by Robert Cauer studio in Los Angeles.