Answer on Question 49813, Physics, Mechanics — Kinematics — Dynamics You pluck a G string on a guitar which should be 196hz, and you wish to tune this string. A tuning fork is known to vibrate at 196hz is simultaneously struck, and in a time period of 10s you count 17 beats. Determine the actual frequency of the guitar string.

Solution

So we have beat effect here. Beat frequency is $17/10 = 1.7$ Hz. This is the difference between frequencies of guitar and fork. Hence, guitar has frequency of

$$196 + 1.7 = 197.7 \, Hz$$