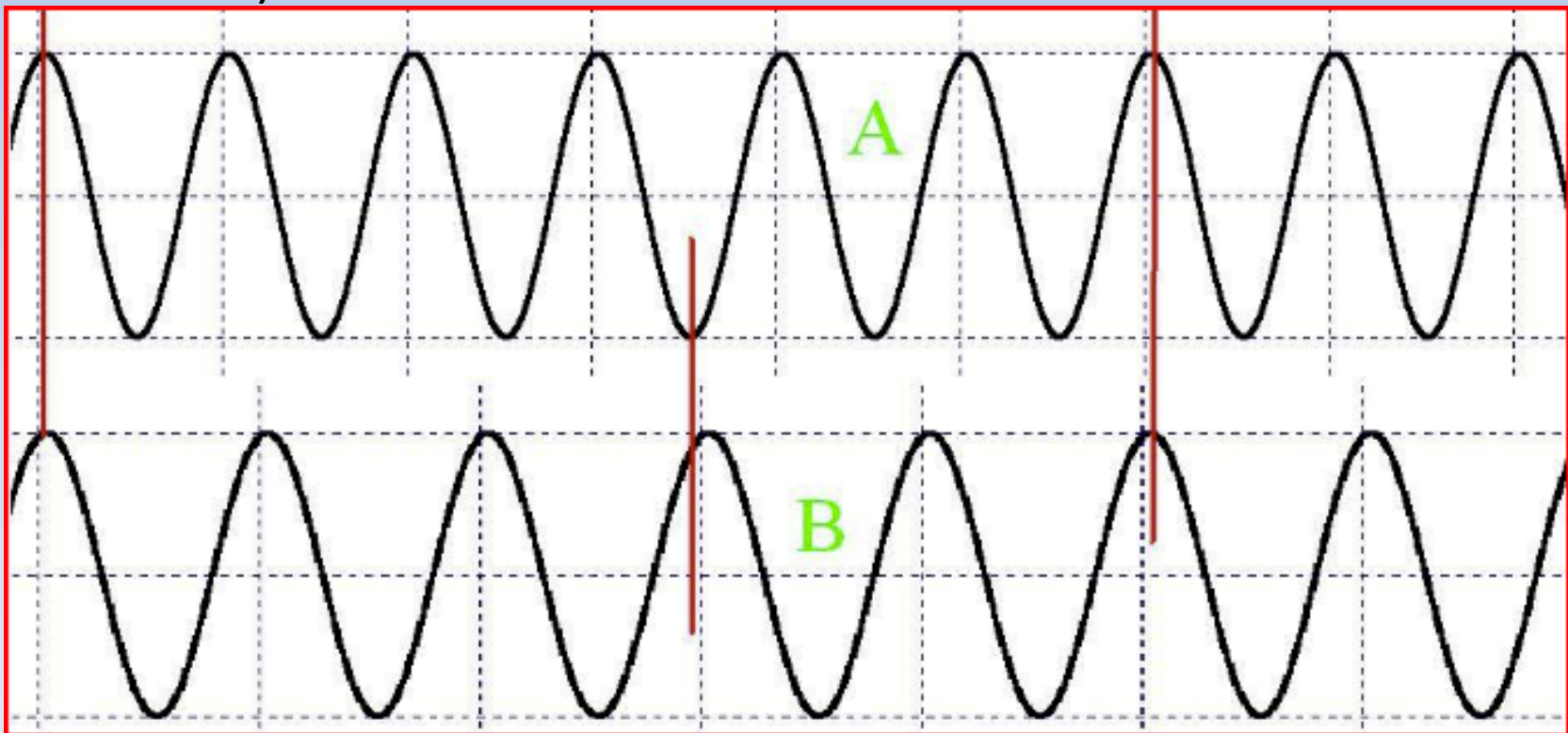


Themed: 03-03

Beats: tuning a piano

Review - Waves/Sound Notes Beats

- Look at the waves below and recognize:
 - They are from two separate sound sources
 - They go from in-phase to out-of-phase
 - They go from LOUD to QUIET because of..... (begins with letter I)



Counting beats to tune a piano/guitar

- Beat frequency: Beats = $|f_1 - f_2|$
- Beats cannot be negative (absolute value symbols)
- Tightening string raises f
 - Fewer beats? You went the right direction, tighten a little more
 - More beats? Oops! It was already too tight, loosen it and try again
- Challenge: You have 215, 235 and 255 Hz tuning forks. Which would work best to verify a piano string is tuned to play A_3 ? Why?