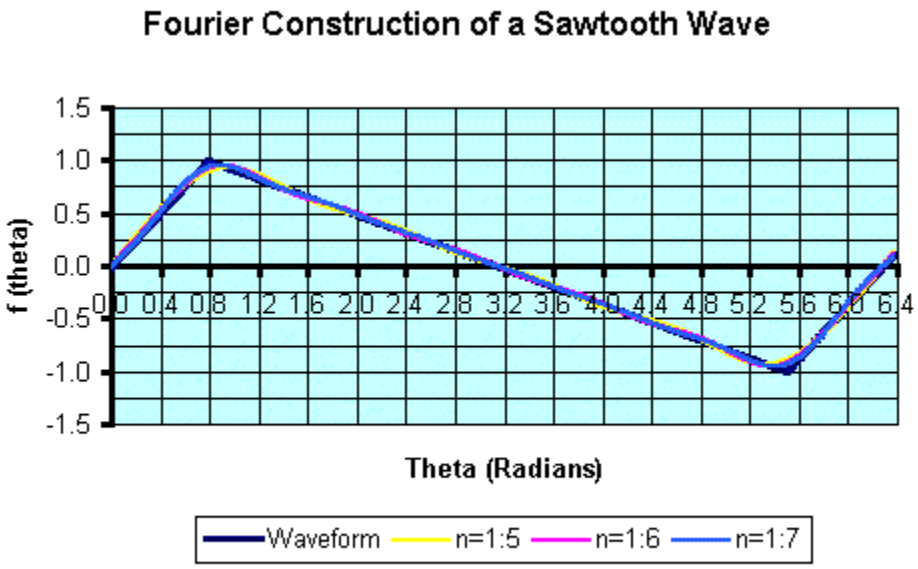
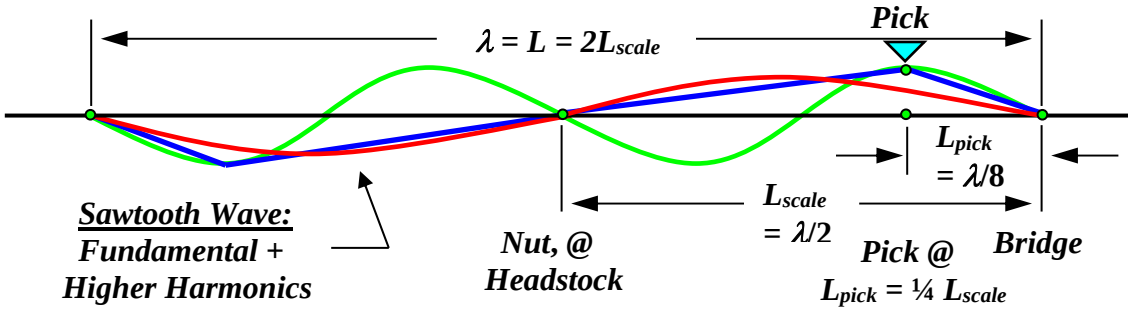


Again, adding on higher harmonics to the lower-order harmonics associated with the sawtooth wave makes for only small visual changes in the overall waveform - primarily, just the peak(s) sharpen as the higher harmonics are added.

The sawtooth wave again has physical relevance in stringed instruments, such as the guitar or violin, when the strings are plucked at the *one-quarter-point* along the length of the string (as measured from the bridge), using either one's fingernail or a guitar pick, as shown in the figure below. This is the region along the strings where guitar players spend much of their time playing notes and/or chords on the guitar.

Vibration of the Fundamental and 2nd Harmonic of a Guitar String



As can be seen from the figure, this picking location is *not* at the anti-node of the fundamental. It *is*, however at the anti-node associated with the second harmonic, an octave above the fundamental. The picking location is *near to*, but not *on* the anti-node of the third harmonic (e.g. see diagram, 2nd figure below). As mentioned earlier, this picking location is at the *node* of the fourth harmonic, which is the physical reason why *it* is not