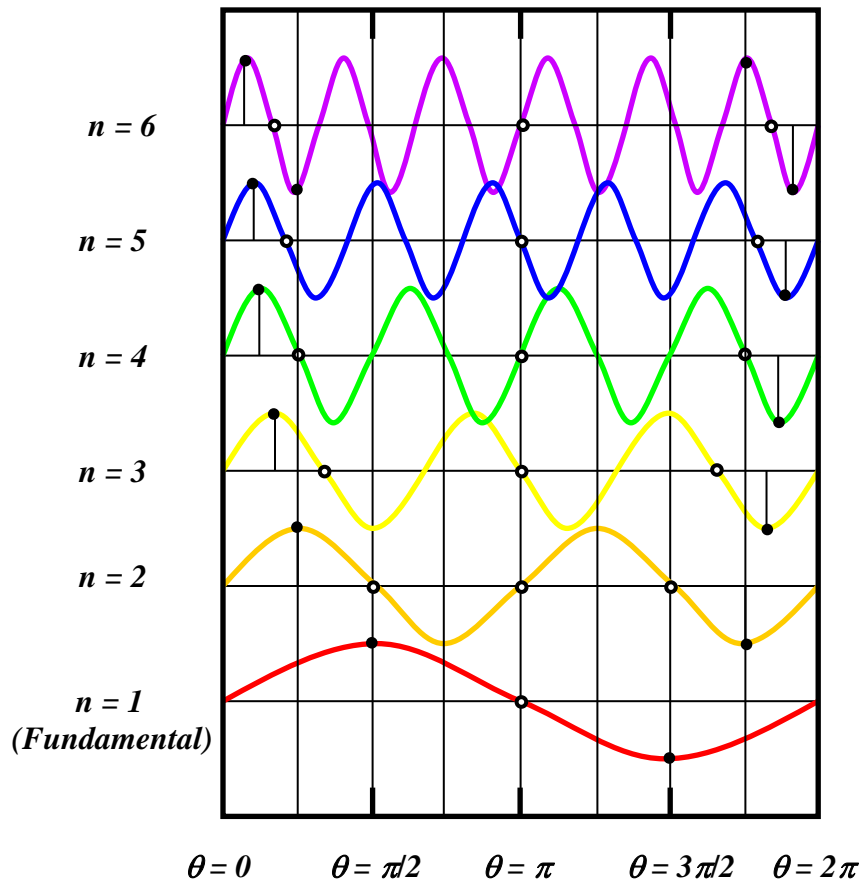


If the value of the α_p -parameter is such that $\theta_p = 2\pi\alpha_p$ and $\theta_p = 2\pi(1 - \alpha)$ correspond to *anti-nodes* associated with one (or more) Fourier harmonics, b_n then the harmonic amplitudes, $|r_n| = |b_n|$ associated with the bipolar sawtooth wave will be particularly strong. This occurs when $\sin(2n\pi\alpha_p) = 1$, i.e. when $(2n\pi\alpha_p) = (2m-1)\pi/2$ (where m is again an integer $m = 1, 2, 3, \dots$ etc.), i.e. when $n = (2m-1)/4\alpha_p$, or equivalently, when $\alpha_p = (2m-1)/4n$ (with $0 < \alpha_p < 1/2$).

Again, we have already have experience with this phenomenon, in the above example of the bipolar sawtooth wave, where $\alpha_p = 1/8$, corresponding to $\theta_p = \pi/4$ and $\theta_p = 7\pi/4$, which are *anti-nodes* of the $n = 2^{\text{nd}}$, 6^{th} , 10^{th} , 14^{th} , ... etc. Fourier harmonics, b_n , but which also simultaneously correspond to *nodes* of the $n = 4^{\text{th}}$, 8^{th} , 12^{th} , 16^{th} , ... etc. Fourier harmonics, b_n , as shown in the figure below, for the first six harmonics:



Some of the *anti-nodes* (*nodes*) associated with each harmonic in the above figure are explicitly marked with a solid bullet (open circle), respectively. Note also that all of these harmonics are drawn as being in-phase with each other. If one imagines a vertical line drawn for the $(\theta_p = 2\pi\alpha_p)$ -parameter (representing the peak location of the triangle wave) ranging between $0 < (\theta_p = 2\pi\alpha_p) < \pi$, the intersection of this line with each of the harmonics, will indicate whether or not that harmonic is in-phase or out-of-phase with the fundamental, and/or whether the harmonics are at a node or anti-node for this value of θ_p .