Amplitude Distortion
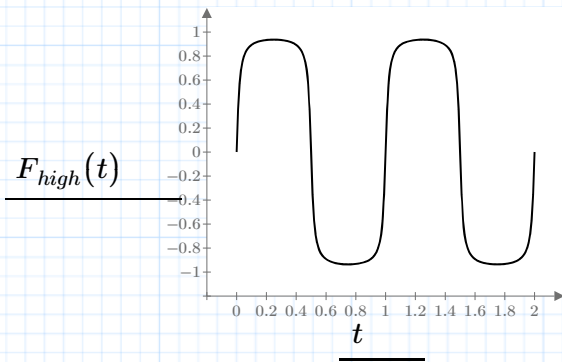
$$t := 0, 0.01 .. 2 \qquad n := 1 .. 50$$

$$B_n := \frac{4}{\pi \cdot (2 \cdot n - 1)} \cdot e^{(-0.1 \cdot (2 \cdot n - 1))}$$

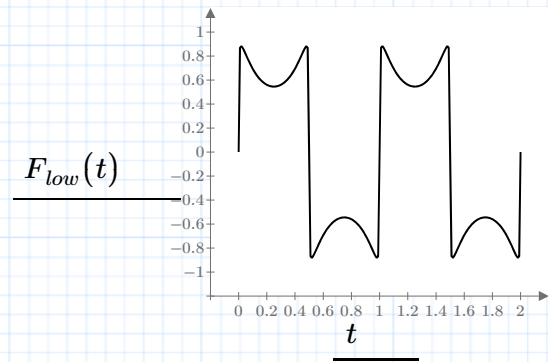$$C_n := \frac{4}{\pi \cdot (2 \cdot n - 1)} \cdot \left(1 - e^{(-(2 \cdot n - 1))}\right)$$

$$F_{high}(t) := \sum_n \left(B_n \cdot \sin\left((2 \cdot n - 1) \cdot 2 \cdot \pi \cdot t\right)\right)$$

$$F_{low}(t) := \sum_n \left(C_n \cdot \sin\left((2 \cdot n - 1) \cdot 2 \cdot \pi \cdot t\right)\right)$$

$F_{high}(t)$

$F_{low}(t)$

(a) high frequency components attenuated   (b) low frequency components attenuated