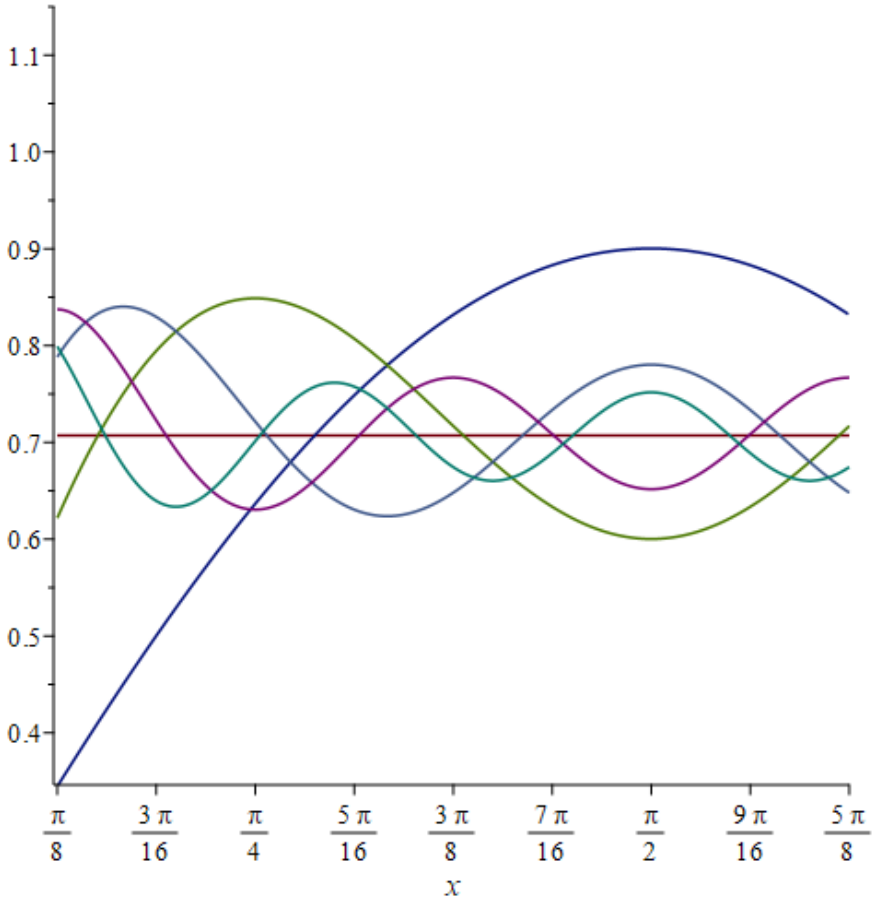
Approximation III



The third in a series of approximations

Depicted are the first five Fourier sine approximations

to the constant function f(x)=sin(π/4)=½√2

The n-th Fourier sine approximation is a linear combination of functions

of the form sine(kx) with positive integers k smaller than or equal to n

Each Fourier sine approximation is close to the function

in the distance defined by integration over the interval from 0 to π