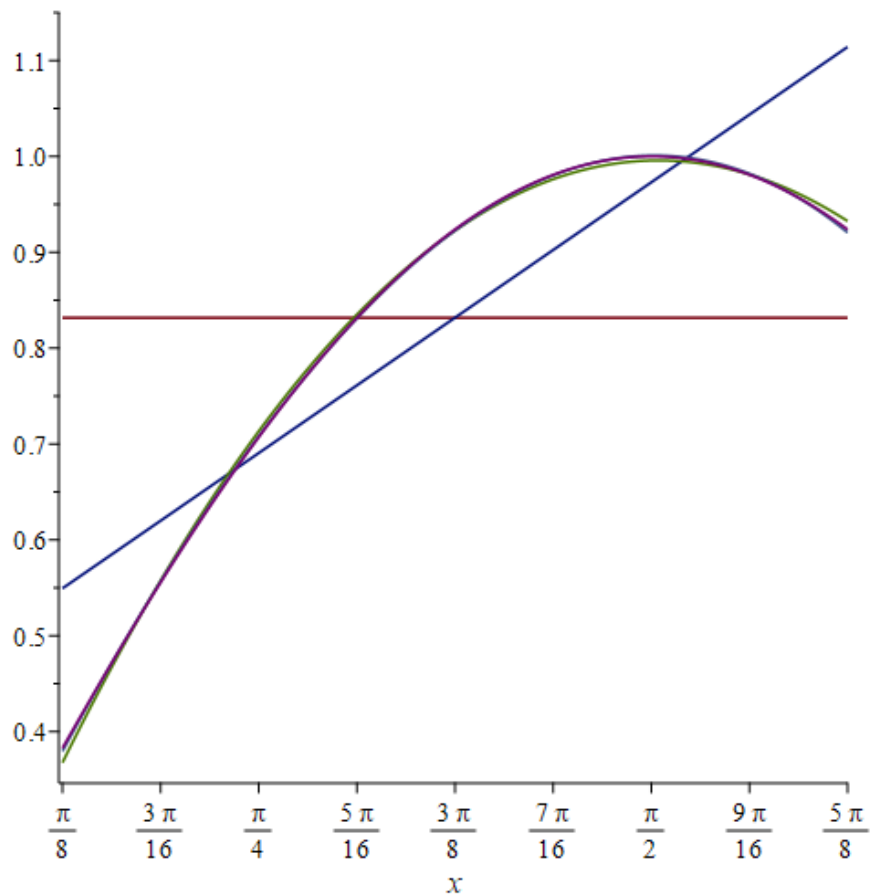


Approximation II



The second in a series of approximations

Depicted are the first five orthogonal polynomial approximations to the sine function on the interval from $\pi/8$ to $5\pi/8$

The n -th orthogonal polynomial approximation is a polynomial of degree n

For each orthogonal polynomial approximation, the signed area between the approximation and the function vanishes on the interval