

> B(1);B(n) assuming n > 0;

$$\frac{2}{\pi} \frac{2 \left( -1 + \cos \left( \frac{1}{2} n \pi \right) \right)}{n \pi} \quad (5)$$

> # Truncated sine series S(x,n)

> S:=(x,n)->sum(B(k)\*sin(k\*Pi\*x/L),k=1..n);plot(S(x,50),x=-5\*L..5\*L);

$$S := (x, n) \rightarrow \sum_{k=1}^n B(k) \sin \left( \frac{k \pi x}{L} \right)$$