

> $\text{int}\left(x \cdot \cos\left(\frac{n \cdot \text{Pi} \cdot x}{2}\right), x=0..1\right) + \text{int}\left((2-x) \cdot \cos\left(\frac{n \cdot \text{Pi} \cdot x}{2}\right), x=1..2\right);$

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

(1)

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

> *simplify*(%);

$$- \frac{8 \cos\left(\frac{1}{2} n \pi\right) \left(\cos\left(\frac{1}{2} n \pi\right) - 1 \right)}{n^2 \pi^2}$$

(2)

> $a := \text{unapply}(\%, n);$

$$a := n \rightarrow - \frac{8 \cos\left(\frac{1}{2} n \pi\right) \left(\cos\left(\frac{1}{2} n \pi\right) - 1 \right)}{n^2 \pi^2}$$

(3)

> $f := x \rightarrow 0.5 + \text{sum}\left(a(n) \cdot \cos\left(\frac{n \cdot \text{Pi} \cdot x}{2}\right), n=1..20\right);$

$$f := x \rightarrow 0.5 + \sum_{n=1}^{20} a(n) \cos\left(\frac{1}{2} n \pi x\right)$$

(4)

> $\text{plot}(f(x), x=-3..3);$

