

Let $I = \int_0^1 x \sin(x^2) dx$

1. Calculate L_4 by hand. Does this overestimate or underestimate I ?
2. Write L_{10} using sigma notation.
3. Use Maple to draw L_{10} and R_{10}
(Use the `leftbox()` and `rightbox()` commands)
4. Use Maple to calculate L_{10} and R_{10}
(Use the `leftsum()` and `rightsum()` commands)
How does I compare to L_{10} and R_{10} ?
5. Find the exact value of I by using u -substitution. Does this make sense?