(13) Rearranjando R1 e R2:

$$R_1 = \sum_{i=0}^{n/2-1} \frac{2h}{2} f(x_{2i}) + f(x_{2(i+1)}) = \frac{2h}{2}\left(f(a)+f(b)+2\sum_{i=1}^{n/2-1} f(x_{2i})\right)$$

$$R_2 = \sum_{i=0}^{n-1} \frac{h}{2} f(x_i) + f(x_{i+1}) = \frac{h}{2}\left(f(a)+f(b)+2\sum_{i=1}^{n-1} f(x_i)\right)$$

$$S = \frac{4R_2 - R_1}{3}$$

$$= \left[2h\left(f(a)+2\sum_{i=1}^{n-1} f(x_i)+f(b)\right) - h\left(f(a)+2\sum_{i=1}^{n/2-1} f(x_{2i})+f(b)\right)\right]\cdot\frac{1}{3}$$

$$= \frac{h}{3}\left[2f(a)+4\sum_{i=1}^{n-1} f(x_i)+2f(b)-f(a)-2\sum_{i=1}^{n/2-1} f(x_{2i})-f(b)\right] \quad (*)$$

$$= \frac{h}{3}\left(f(a)+4\left(\sum_{i=1}^{n/2} f(x_{2i-1})+\sum_{i=1}^{n/2-1} f(x_{2i})\right)-2\sum_{i=1}^{n/2-1} f(x_{2i})+f(b)\right)$$

$$= \frac{h}{3}\left(f(a)+4\sum_{i=1}^{n/2} f(x_{2i-1})+2\sum_{i=1}^{n/2-1} f(x_{2i})+f(b)\right)$$

(*) Pois é possível separar a soma de R2 em pares e ímpares

$$\sum_{i=1}^{n/2-1} f(x_{2i}) + \sum_{i=1}^{n/2-1} f(x_{2i+1})$$