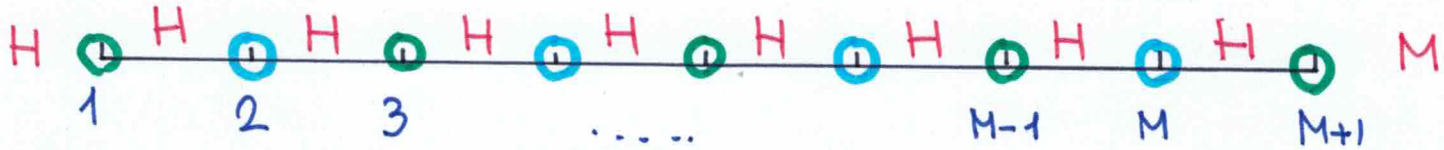
IMPLEMENTAZIONE DELLA FORMULA DI QUADRATURA DEI TRAPEZI COMPOSITI



Numerazione nodi MATLAB: $a_1, a_2, a_3, \ldots\ldots$

Attuale: Passo H — n° intervalli M — n° nodi $M+1$

Precedente: Passo $2H$ — n° intervalli $\frac{M}{2}$ — n° nodi $\frac{M}{2}+1$

new ↖ ○ ○ ↗ old

$$\widetilde{I}_{2H} = \underbrace{\left[f(a) + 2\sum_{i=2}^{M/2} f(a_i) + f(b)\right]}_{[\ ]} \frac{2H}{2} = [\ ] * H$$

$$\widetilde{I}_H = \left[f(a) + 2\sum_{i=2}^{M} f(a_i) + f(b)\right]\frac{H}{2} =$$

$$\underbrace{\left[f(a) + 2\sum_{\substack{i=3 \\ \text{dispari}}}^{M-1} f(a_i) + f(b)\right]\frac{H}{2}}_{\text{PRECEDENTE} = \widetilde{I}_{2H} : H} + \underbrace{\left[2\sum_{\substack{i=2 \\ \text{pari}}}^{M} f(a_i)\right]\frac{H}{2}}_{\text{ATTUALE}}$$

$$\widetilde{I}_H = \left\{\frac{1}{H}\underbrace{\widetilde{I}_{2H}}_{} + \underbrace{\left[2\sum_{\substack{i=2 \\ \text{pari}}}^{M} f(a_i)\right]}_{\text{pari}}\right\}\frac{H}{2}$$