Błąd metody złożonych trapezów

$$R_n^T(f) = -\frac{n h^3}{12} f''(\eta), \quad h = \frac{b-a}{n}$$

$$|R_n^T(f)| < \varepsilon$$

$$|f''(x)| < 2$$

$$|R_n^T(f)| \leq \left| -\frac{(b-a)^3}{6n^2} \right| < \varepsilon$$

$$\sqrt{\frac{(b-a)^3}{6\varepsilon}} < n$$

Obliczamy $\int_a^b f(x)\,dx = h \sum_{k=0}^{n}{}'' f(t_k)$, $t_k = a + kh$