

Thus $\lim_{h \rightarrow 0} \frac{\cos h - 1 + \frac{1}{2}h^2}{h^4} = \frac{1}{24}$ with rate of convergence $O(h^2)$ or

$$\frac{\cos h - 1 + \frac{1}{2}h^2}{h^4} = \frac{1}{24} + O(h^2). \quad \square$$