## Herramientas Computacionales para Ciencias Homework 8

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## [1.0/5.0] Taylor Expansion

Taylor expansions is one of the most used approximation to functions on a certain point.

$$\sin(\theta) = \sum_{n=0}^{\infty} \frac{(-1)^{2n+1}}{(2n+1)!} \theta^{2n+1} \tag{1}$$

- Create the function factorial.
- $\bullet$  Create the expansion recieving  $\theta$  and  $n_{\rm max}$

create a  $3 \times 3$  grid of plots, each plot must have two curves,

- The  $\sin(\theta)$  vs  $\theta$
- ullet The Taylor approximation with n terms, where n is the position on the grid.

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