## Taylor polynomials

## Question

Which of the following Taylor polynomials for $\sin (x)$ would be most useful for approximating $\sin (3)$ by hand?
A. $x-\frac{1}{3!} x^{3}$
B. $1-\frac{1}{2!}\left(x-\frac{\pi}{2}\right)^{2}$
C. $-(x-\pi)+\frac{1}{3!}(x-\pi)^{3}$
D. $\sin (3)-\frac{1}{3!} \sin (3)(x-3)^{3}$

