1 Power Series Practice

(a) Calculate the $n = 0, 1, 2, 3, 4$ coefficients of the power series for $\cos z$ expanded around $z = \pi$. Using these coefficients, find a power series approximation for this function.

(b) Plot both the original function and your approximation.

(c) For what values of z is your approximation "good"?

2 Sensemaking from Graphs of Power Series I

For the following graphs, identify the minimum order in a power series expansion that could accurately describe the curve for all values of the independent variable.

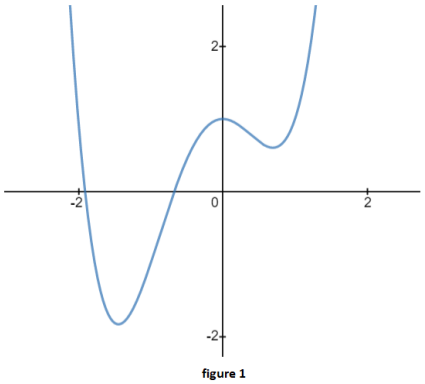


figure 1

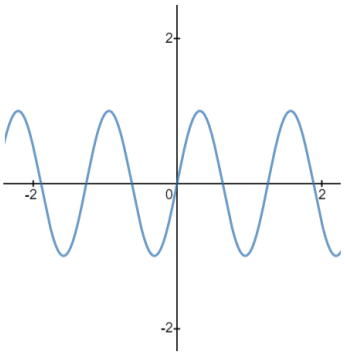


figure 2

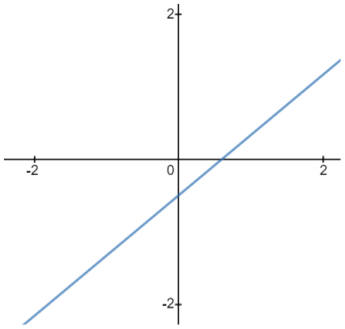


figure 3