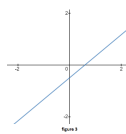
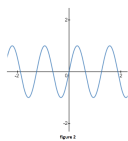
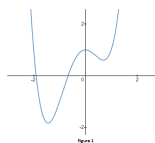


1. For the following graphs, identify the minimum order in a power series expansion that could accurately describe the curve for all values of the independent variable.



Solution The leftmost graph has 3 turnaround points and must at minimum be of order 4. The middle graph is of $\sin(x)$ and needs an infinite number of terms to accurately describe it for all values of x . The far right graph is linear and only needs to go to order 1.