1. Consider the function \( g(x) = x^3 - 4x \) and \( G(x) = 2x^2 - 3 \).

   (a) Plot the graphs of these two functions together on the interval \([-2, 2]\).

   (b) Find the points of intersection of the two graphs.

   (c) How should you adjust the interval in (a) so that the graph shows the answer in part (b)? Can you answer (b) using (a)? Explain.

1. Consider the piecewise function

   \[
   f(x) = \begin{cases} 
   1 - x^2 & \text{if } x \leq 0; \\
   2 + x & \text{if } 0 < x \leq 1; \\
   2 + (x - 2)^2 & \text{if } x > 1 
   \end{cases}
   \]

   (a) Use “\text{plot, discont= true}” command to graph the function.

   (b) Use “\text{limit}” command to find the limit of the function at \( x = 0 \) and \( x = 1 \).

   (c) Find the numbers at which \( f(x) \) is discontinuous.