1. Find the derivatives of the following functions, and verify your answer by graphing f and f' on the same set of axes.

   (a) $f(x) = x^2 - 2x + 3$

   (b) $f(x) = x^3 - \dfrac{5}{x^2} + 2$

   (c) $f(x) = 2x^\pi + x^{-42} - 17x$

   (d) $f(x) = \dfrac{7}{x} - x + 4$

2. Find an *anti*derivative for each function in 1.