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

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

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

2. Find an *antiderivative* for each function in 1.