

1. Find the antiderivatives of the following functions.
You can always verify your answers by graphing $f(x)$ and its antiderivative 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 a function with stationary points at $x = -1$, $x = 0$ and $x = 2$.