

(1) [8 points] Neatly sketch the graph of the function $f(x) = \sqrt{x-1} + 2$

(2) [7 points] Neatly sketch the graph of the function $f(x) = 3(x - 1)^2 + 2$

(3) [5 bonus points] Reduce to lowest terms:

$$\frac{x^3 + x^2}{x^3 + 1}$$