AP Calculus AB
Dr. Paul L. Bailey

Activity 0205
Wednesday, February 5, 2025

Name:

Problem 1. Let

$$f(x) = \frac{x^2 + x - 6}{x - 3}.$$

(a) Find the zeros, poles, y-intercept, and slant asymptote of f.

(b) Sketch the graph of f.

(c) Find $f'(x)$.

(d) Find the domain and range of f, and adjust your graph accordingly.

(e) Let g be the branch of inverse of f whose range contains 7. Find $g'(14)$.