Quiz 4.1 – Analyzing Rational Functions

Let $f(x) = \frac{(x+6)(x+3)^5(x-1)^4}{(x+3)^3(x-1)^5(x-4)^3}$.   Enter the correct values for the requested information. Enter 'None' if necessary, and use a comma-separated list for multiple answers.

(a) Domain is all real numbers except $x =$ _____

(b) x -intercept(s) at $x =$ _____

(c) y -intercept at $y =$ _____

(d) Vertical asymptotes(s) at $x =$ _____

(e) Holes at $x =$ _____

Let $f(x) = \frac{x^2+16x+63}{x^2+8x+15}$.

(a) Domain is all real numbers except $x =$ _____.

(b) y -intercept at $y =$ _____.

(c) x -intercept(s) at $x =$ _____.

(d) Vertical asymptote(s) at $x =$ _____.