



## Quiz 4.1 – Analyzing Rational Functions

1. (1 point) —alfredLibrary/AUCI/chapter4/lesson1/quiz/question2pet.pg

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 asymptote(s) at  $x =$  \_\_\_\_\_

(e) Holes at  $x =$  \_\_\_\_\_

2. (1 point) —alfredLibrary/AUCI/chapter4/lesson1/quiz/graphanalysis

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  $x =$  \_\_\_\_\_.