

RATIONAL FUNCTION GRAPHS

NAME: _____

Period: _____

GROUP MEMBERS: _____

(Version 3.)

FOR QUESTIONS 1 AND 2,
SKETCH THESE FUNCTIONS, $f(x)$,
 BUT FIRST, FIND (if they exist)

a, Zeros

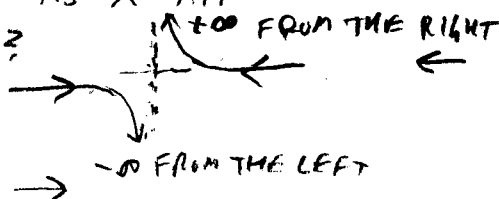
b, Y-INTERCEPT

c, VERTICAL ASYMPTOTES

d, HORIZONTAL ASYMPTOTES

e, SLANT ASYMPTOTES

f, THE BEHAVIOR NEAR VERTICAL
 ASYMPTOTES. DOES $f(x)$ APPROACH
 $+\infty$ OR $-\infty$ AS x APPROACHES
 THE ASYMPTOTE?

SEE EXAMPLE: 

g, Holes

$$1. f(x) = \frac{x-a}{x-2a} \quad (a > 0)$$

$$2. f(x) = \frac{x^2 - a^2}{x-a} \quad (a > 0)$$