PRE CALCULUS NAME

HW SET 7

1. Consider the function defined by g(x) = .
	1. Identify the vertical asymptotes of the graph of g.
	2. Identify the behavior of g near any vertical asymptotes.
	3. Describe the end behavior of g.
2. Given f(x) = , find

 a.) $\lim\_{x\to \infty }f(x)$\_\_\_\_\_\_\_ b.) $\lim\_{x\to -\infty }f(x)$f(x) \_\_\_\_\_\_\_\_\_\_\_\_\_\_

 c.) $\lim\_{x\to -4^{+}}f(x)$\_\_\_\_\_\_\_\_ d.) $\lim\_{x\to -4^{-}}f(x)$\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. Given f(x) = 

a) find equations for any vertical asymptotes

b.) determine the intermediate behavior

c.) describe the behavior of the function near any removable

 discontinuity.

4.  < 10 4. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

5. 2 (x – 5)(x+1)(x+3) > 0 5. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

6. Consider the function g(x) =. Find f(-1) and f(1). Does a zero

 exist in the interval [-1, 1]? Defend your answer.

7. Given f(x) = , determine the domain, range, intercepts, asymptotes, end behavior, and behavior near asymptotes. Include a sketch of the graph of g (you should be able to do this without a calculator).