

Calculus AB

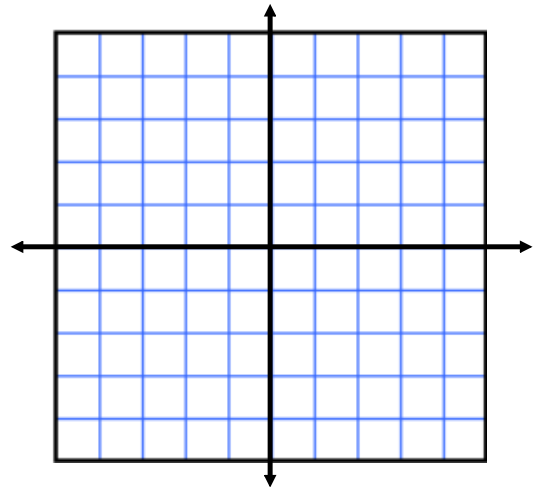
3-6

Curve Sketching

Find each of the following and sketch.

$$f(x) = \frac{x}{x^2 - 1}$$

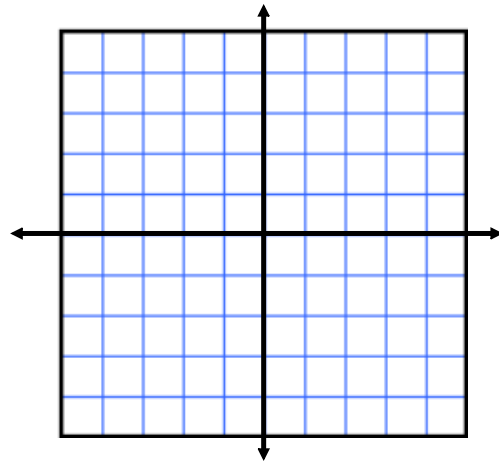
Domain	
Range	
Horizontal Asymptotes	
Vertical Asymptotes	
zeros	
y-intercepts	
relative mins	
relative maxs	
Points of Inflection	
Increasing Interval	
Decreasing Interval	
Concave Up	
Concave Down	



Sketch a graph for the following information.

x	$(-\infty, -1)$	-1	$(-1, 0)$	0	$(0, 3)$	3	$(3, \infty)$
$f(x)$		\emptyset		1		\emptyset	
$f'(x)$	$-$	\emptyset	$-$	0	$+$	\emptyset	$+$
$f''(x)$	$-$	\emptyset	$+$	$+$	$+$	\emptyset	$-$

*1a) Given vertical asymptotes at $x = -1$ and $x = 3$.



Sketch a graph for the following information.

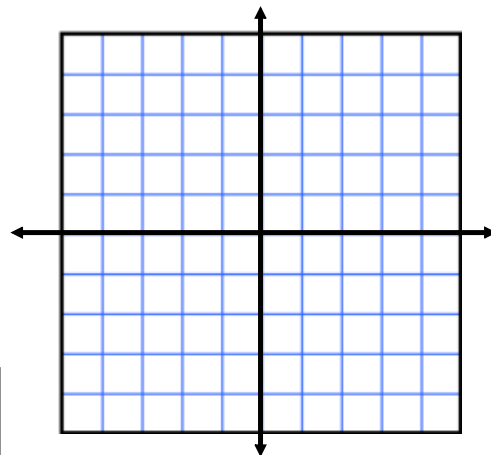
x	$(-\infty, -1)$	-1	$(-1, 0)$	0	$(0, 3)$	3	$(3, \infty)$
$f(x)$		\emptyset		1		\emptyset	
$f'(x)$	$-$	\emptyset	$-$	0	$+$	\emptyset	$+$
$f''(x)$	$-$	\emptyset	$+$	$+$	$+$	\emptyset	$-$

*1b) Given

$$\lim_{x \rightarrow -1} f(x) = 2$$

$$\lim_{x \rightarrow 3^-} f(x) = 4$$

$$\lim_{x \rightarrow 3^+} f(x) = -3$$



Assignment
Pg. 215

1-4, 7-31 (every 4th),
and Handout