

Vertical asymptotes occur when

Horizontal asymptotes occur when

Give an example of a function with two vertical asymptotes

Give an example of a function with a horizontal asymptote.

When do you factor out the highest power in the denominator?

When do you rationalize the numerator (or denominator)?

Draw the graph of a function with the following properties: domain = $(-5, \infty)$, range = $(-4, \infty)$

f is continuous everywhere except at 0, 5

f is differentiable everywhere except at 0, 5, 7

$f(0) = 4$, $f'(x) = \frac{2}{3}$ if $x \in \{-1\} \cup [2, 4]$

$f'(1) = 0$, $f'(x) < 0$ if $x < -3$.

Given the graphs of $y = f(x)$ below, $\lim_{x \rightarrow 3} f(x) =$

Given the $\epsilon > 0$ shown in the graph below, find $\delta > 0$ such that if $0 < |x - 3| < \delta$, then $|f(x) - 4| < \epsilon$

HW4 due Friday Feb 23

2.7) 1, 2, 3, 9, 13, 15, 17, 27

2.8) 3, 4, 5, 7, 15, 25, 29, 33, 35, 36

2.9) 4, 7, 9, 21, 27, 29, 37, 38

3.1) 3, 23, 29, 31, 45

3.2) 3, 5, 7, 11, 13, 15, 17, 19, 25, 31, 33, 35

3.3) 1, 7, 9, 13, 19, 21, 29, 31