

Daily Agenda

Learning Target:
I can graph rational functions.

Homework
5.3 Worksheet

Assessments
Unit 5 Test 12/1

If you tell the truth, you don't have to remember anything.
-Mark Twain

Nov 15-8:24 PM

5.3 Graphing Rational Functions

- a rational function is a ratio of two polynomials
- the domain is restricted, sometimes range is also
- this causes asymptotes or removable discontinuities

vertical or horizontal dashed line; describes behavior at a value of x or end behavior

open point on graph (-factor divides out)

Nov 15-8:30 PM

Graph $f(x)$ and include asymptotes, intercepts, and a table of values

$$f(x) = \frac{x+1}{x-1} \quad x \neq 1$$

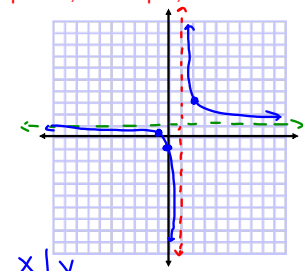
VASY $x-1=0$ $x=1$
HASY $y=1$

y.int $(0, -1)$

x.int $(x-1) \cdot 0 = \frac{x+1}{x-1} \cdot (x-1)$
 $0 = x+1$
 $-1 = x$
 $(-1, 0)$

x	y
2	3

$$\frac{2+1}{2-1} = \frac{3}{1}$$



Nov 15-8:30 PM

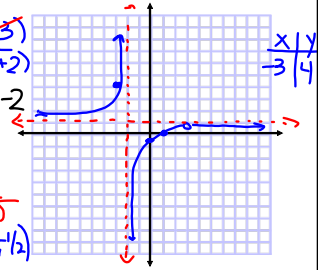
$$f(x) = \frac{x^2 - 4x + 3}{x^2 - x - 6} = \frac{(x-1)(x-3)}{(x-3)(x+2)}$$

$f(x) = \frac{x-1}{x+2}$ D: $x \neq 3, -2$

VASY $x = -2$ HASY $y = 1$

R.D. $(3, 2/5)$

x.int $(1, 0)$ y.int $(0, 1/2)$



Nov 15-8:30 PM

What happens when the denominator equals zero?

$f(x) = \frac{a}{0}$ infinitely large, VASY

$f(x) = \frac{0}{0}$ indeterminate, RD

Nov 15-8:30 PM