

Chapter 8 Graphing Simplified Rationals

I. Identify the type of graph

A. Factor and simplify

B. Look at simplest form.

ex. $\frac{x^2 + 2x + 1}{x + 1} = \frac{\cancel{(x+1)}(x+1)}{\cancel{x+1}} = x+1$ Line
 $mx+b = 1x+1$

ex. $\frac{x^2 - 2x}{x} = \frac{\cancel{x}(x-2)}{\cancel{x}} = x-2$ Line!
 Slope: 1
 y-intercept: -2

Not always a line

$x^2 \rightarrow$ parabola

$x^3 \rightarrow$ cubic

II. Graph the Simplified Function

A. If it's a line, use $mx+b$

($m \rightarrow$ slope & $b \rightarrow$ y-intercept)

B. Find the holes

(what x can't be)

\rightarrow on graph, drawing holes like this:

ex. $\frac{x^3 - 4x^2}{x^2 - 4x} = \frac{\cancel{x^2}(x-4)}{\cancel{x}(x-4)} = \frac{x}{1x+0}$

$m = \frac{1}{1}$ $b = 0$
 (0, 0)

$x \neq 0, 4$



