

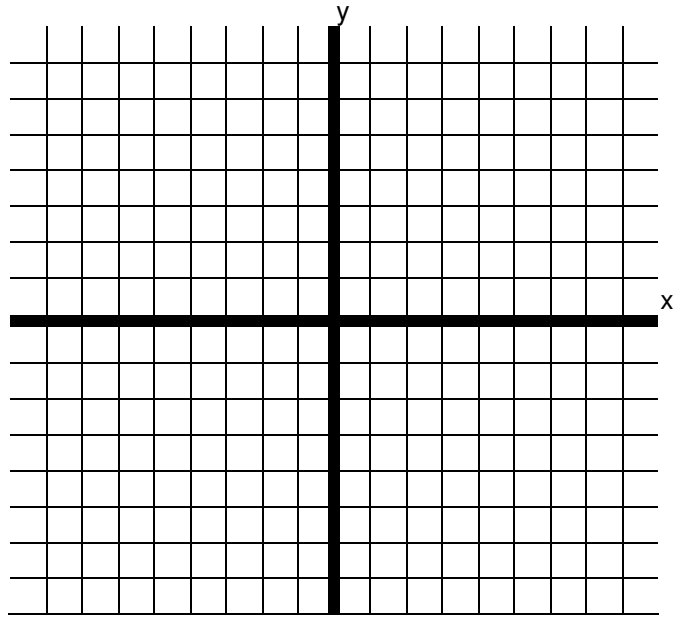
Algebra 2

Graphing Rational Expressions – Part 2

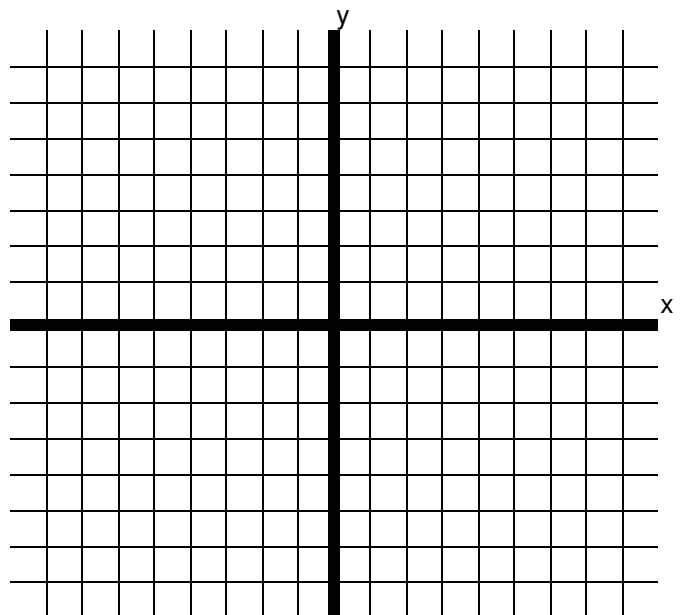
YAY MATH!

The video covers the following exercises. Work along with the class!

$$f(x) = \frac{2}{x} \quad \text{If degree numerator} < \text{degree of denominator, horizontal asymptote: } y = 0$$

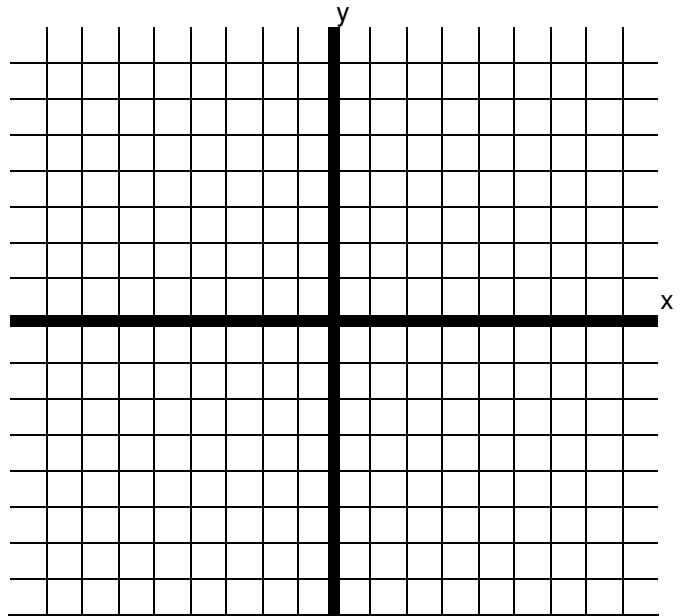


$$f(x) = \frac{2}{x-4}$$



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

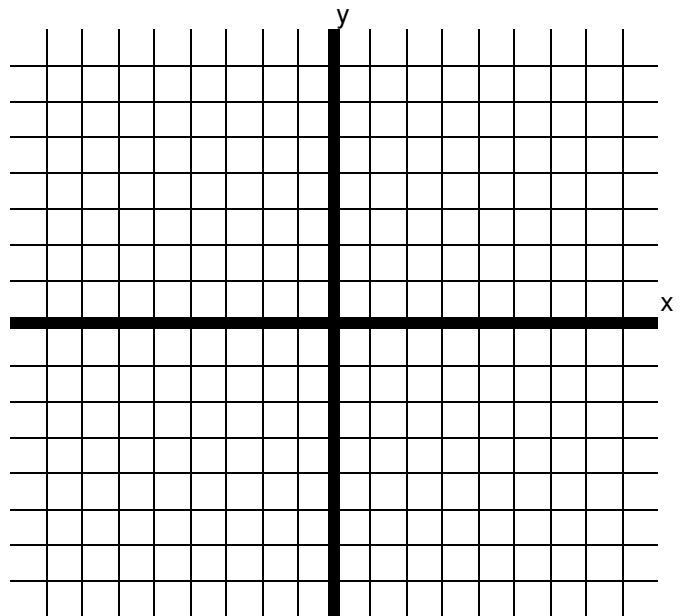
If degree numerator > degree of denominator, **there is NO horizontal asymptote**



$$f(x) = \frac{x}{x + 2}$$

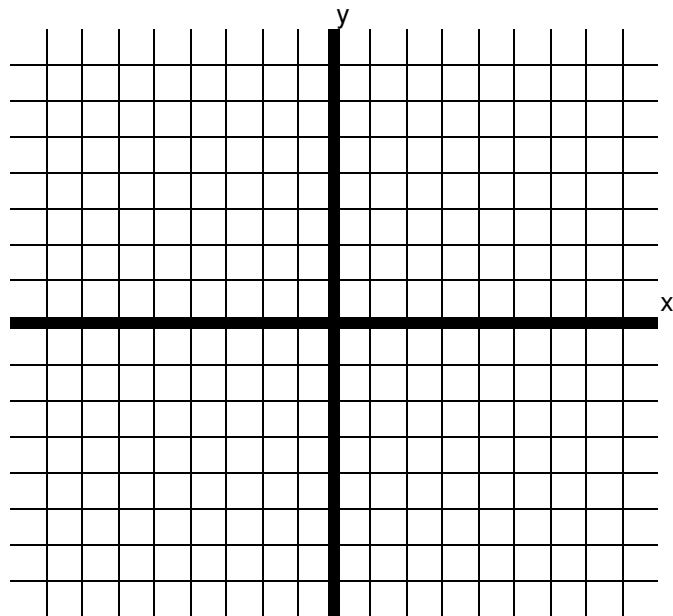
If degree numerator = degree of denominator,

horizontal asymptote is $y = \frac{\text{leading coefficient of numerator}}{\text{leading coefficient of denom.}}$



$$f(x) = \frac{x^2 - 9}{x + 3}$$

If factors in the form $(x - a)$ cancel, it creates a **hole** for the x -value of a . (aka “point discontinuity”)



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

