

STEPS:

① Pull out key information!

- Vertical Asymptote
- Horizontal Asymptote
- Domain
- Holes!

② Draw in our asymptotes!

- dotted lines. (not part of the function, serve as boundary!)

③ Plug function into your calculator in $y=$! Graph it!

- Follow its shape given/around asymptotes!

④ Look to see ~~to see~~ if we have holes!

- If yes, add them. (Big puddles!)
- No, move on!

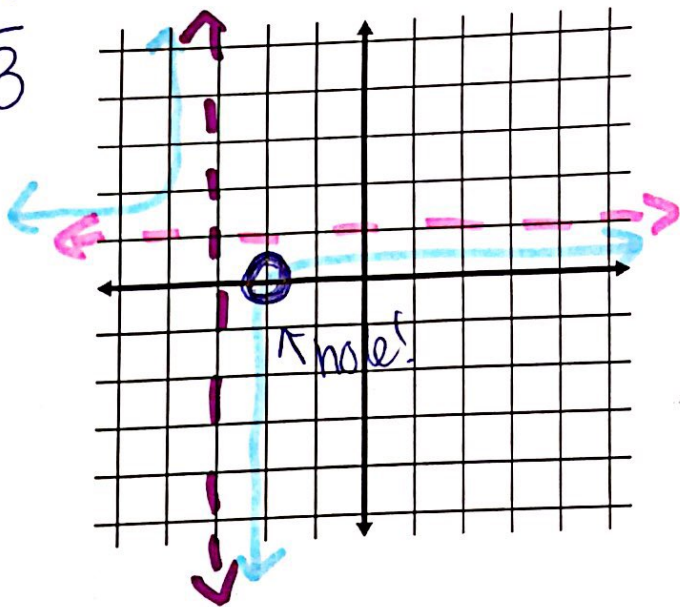
⑤ Admire! Admire your beautiful graph. 😊

$$\text{EX3: } f(x) = \frac{x^2+x-2}{x^2+5x+6} = \frac{(x+2)(x-1)}{(x+3)(x+2)} = \frac{x-1}{x+3}$$

• VA: $x = -3$

Holes: $x = -2$

Domain: All real #s
 $x \neq -3, -2$



• HA: **EATS DC**

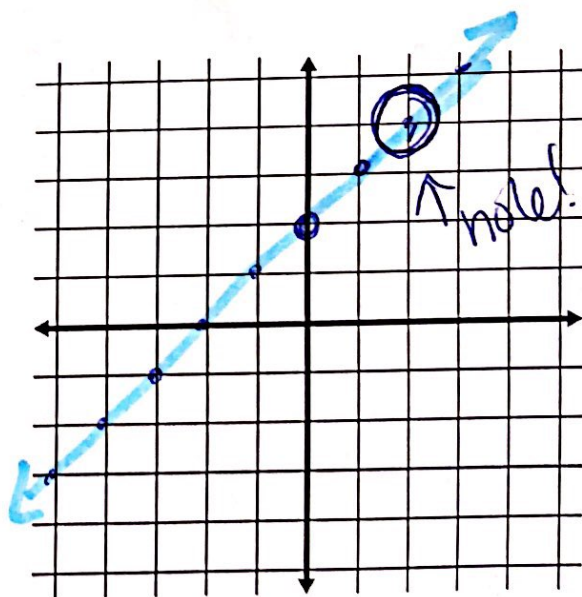
$y = 1/1 = 1$ ($y = 1$)

$$\text{EX4: } f(x) = \frac{x^2-4}{x-2} = \frac{(x+2)(x-2)}{x-2} = \frac{x+2}{1}$$

VA: none!

Holes: $x = 2$

Domain: All real #s $x \neq 2$



HA: **BOTN**

none!