

Adding and Subtracting Rational Expressions

Learning Goal: By the end of today, I will be able to graph rational functions AND I will be able to recognize the location of an asymptote or hole in the graph.

Nov 3-9:07 PM

You will need Desmos or a graphing calculator for the following:

Investigation page 115 - 116
(40 minutes)

Sep 23-10:15 PM

Summary

To locate an asymptote or hole, I am investigating when the denominator goes to zero.

If I have a situation where I have a $\neq 0$ then I have an asymptote

if I have a situation where I have $0/0$ then I most likely have a hole in the graph.

$$f(a) = \frac{3a}{(a+1)(a-3)} \qquad g(a) = \frac{(a-5)(a+3)}{5(a+3)}$$

asymptote at $a = -1$ and $a = 3$

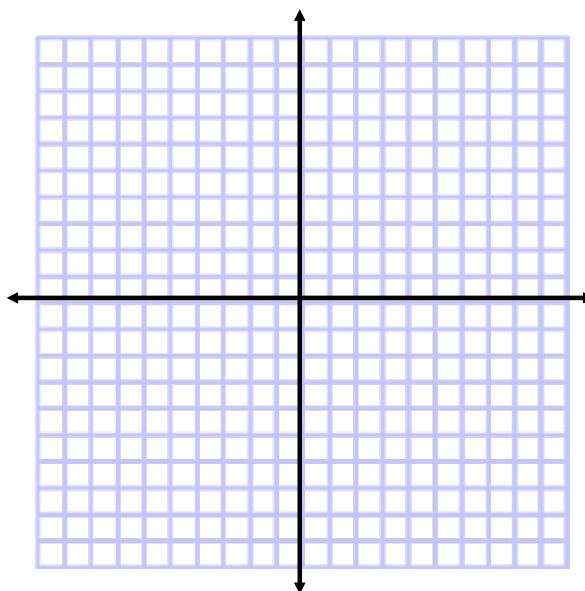
hole at $a = -3$

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Sketch the following:

- state any restrictions

$$f(x) = \frac{5}{x^2 + 2x - 8}$$



Sep 23-10:16 PM

Homework:

Graph the following using asymptotes,
holes, x and y intercepts

$$f(x) = \frac{-2}{(x-3)(x+1)} \quad g(x) = \frac{1}{(2x-5)(3x+1)}$$

Nov 3-9:19 PM