

2. Graphing a rational function: Problem type 1

Graph the rational function $f(x) = \frac{2}{-x+3}$.

To graph the function, draw the horizontal and vertical asymptotes (if any) and plot at least two points on each piece of the graph

The screenshot shows a Windows Internet Explorer browser window displaying an ALEKS problem. The address bar shows the URL: https://secure.aleks.com/alekscgi/x/!sl.exe/1o_u-IgNslkasNW8D8A9PVR1RH3cOF-hAdNBzO-01V-hG98Uba7Tl8wHOCiBzjWj. The search bar contains "Google". The main content area displays the rational function $h(x) = \frac{2x-2}{x^2-x-6}$. Below the function, the instruction reads: "Choose the graph of each function from the choices below." There are six graph options labeled Graph A through Graph F, each showing a coordinate plane with a rational function and its asymptotes. The function in the problem is $f(x) = \frac{2}{-x+3}$. The graphs show various combinations of vertical and horizontal asymptotes and the shape of the function's branches. The task is to identify which of these graphs matches the given function.

October 20, 2014

Upcoming Due Dates:

- Aug 5
 - Quiz 2
- Aug 5
 - Quiz 1
- Sep 29
 - Day 9
- Sep 29
 - Day 8

Course Calendar

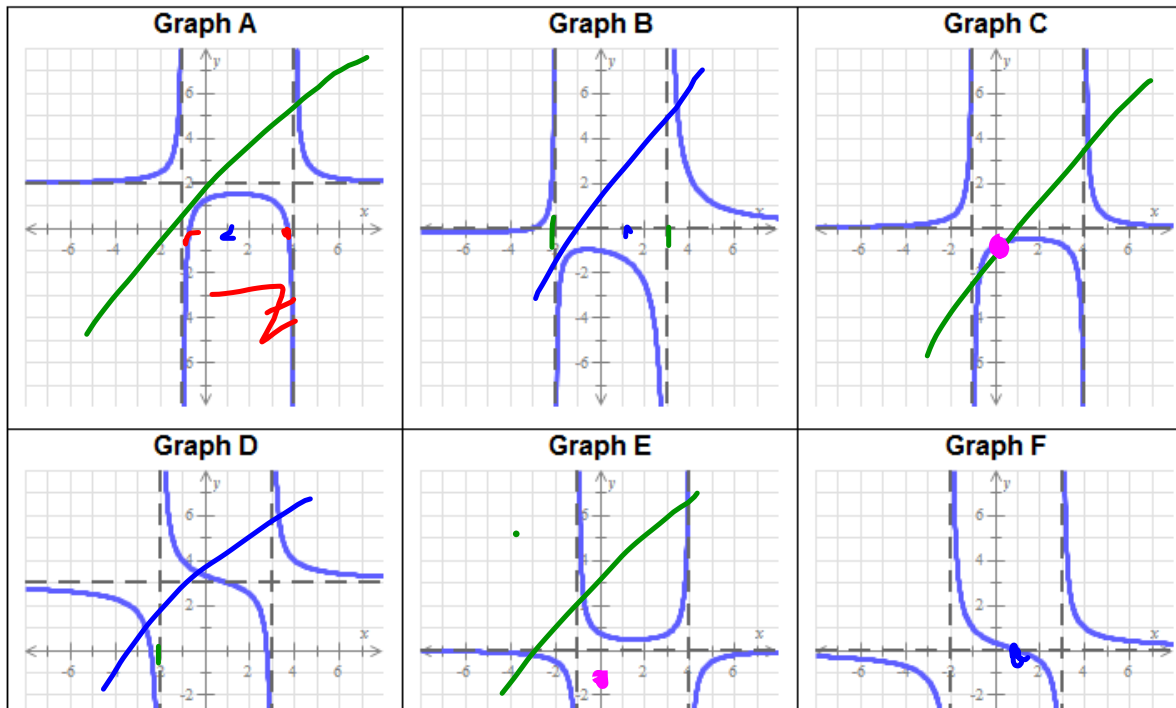
Book

PRECALCULUS
SECOND EDITION
Coburn, John

8:47 PM
10/20/2014

$$h(x) = \frac{2x-2}{x^2-x-6} = \frac{0x^2+2x-2}{x^2-x-6} = 0 \quad \text{HA: } y=0$$

Choose the graph of each function from the choices below.



$$g(x) = \frac{3}{x^2 - 3x - 4}$$

HA: Y=0

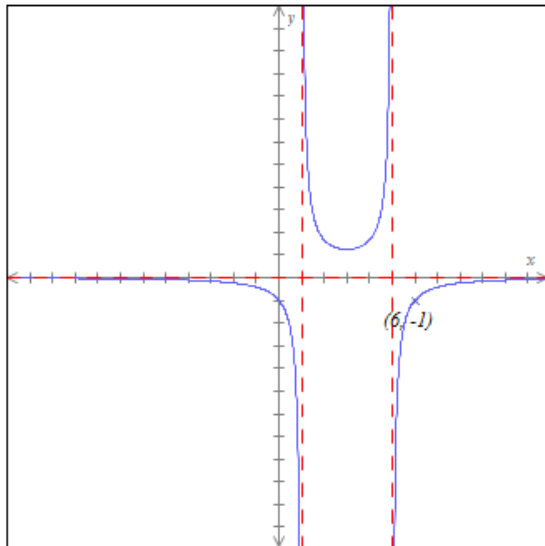
zero: none

VA: (x-4)(x+1)=0, 4, -1

try x=0, y=3/-4

A, C, E all possible

so the answer is C



- $f(x) = \frac{a}{x-b}$
- $f(x) = \frac{a(x-b)}{x-c}$
- $f(x) = \frac{a}{(x-b)(x-c)}$
- $f(x) = \frac{a(x-b)}{(x-c)(x-d)}$
- $f(x) = \frac{a(x-b)(x-c)}{(x-d)(x-e)}$

$$y = \frac{a}{(x-1)(x-5)}$$

plug in $x=6$
and $y=-1$

$$-1 = \frac{a}{(6-1)(6-5)}$$

so $a=-5$

$$y = \frac{-5}{(x-1)(x-5)}$$

7. Solving a rational inequality: Problem type 1

Solve the following inequality.

$$\frac{x-6}{x+4} \geq 0$$

Write your answer using interval notation.

You answered:



Please fill in all the empty boxes before clicking on "Next"...

The correct answer is:

$$(-\infty, -4) \cup [6, \infty)$$