

Rational Functions Discovery

Part 1:

Each answer needs to be entered below for your notes and into Socrative for me to review.

1. Using Google or your favorite search engine, find out what a vertical asymptote is. Write a sentence explaining in words that make sense to you. You may want to include pictures as well.
2. Go to this website (<http://bit.ly/133YO4W>). What is the vertical asymptote of the function $q(x)$?
3. How does the equation of your vertical asymptote relate to the function $q(x)$? (Hint: Look at the equations for $f(x)$ and $g(x)$.)
4. Looking at the same website/function. What is the zero of the function?
5. How does the zero relate to the function $q(x)$? (Hint: Look at the equations for $f(x)$ and $g(x)$.)

When your group gets here stop and check with Mrs. Houck before moving on!

Practice- TURN IN FOR YOUR GRADE!!!

Find the zeros and vertical asymptotes for the following functions.

a) $f(x) = \frac{2x-5}{x+3}$

b) $f(x) = \frac{2}{x-9}$

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

d) $f(x) = \frac{x^2-16}{2}$

e) $f(x) = \frac{x+5}{x^2-x-12}$

f) $f(x) = \frac{x-3}{x^2-16}$