Sec 5.2

Exploring quotients of polynomial functions

Defⁿ: Rational Function

   -a function that can be expressed as $f(x) = \dfrac{p(x)}{q(x)}$

where *p(x)* and *q(x)* are polynomial functions

and $q(x) \neq 0$.
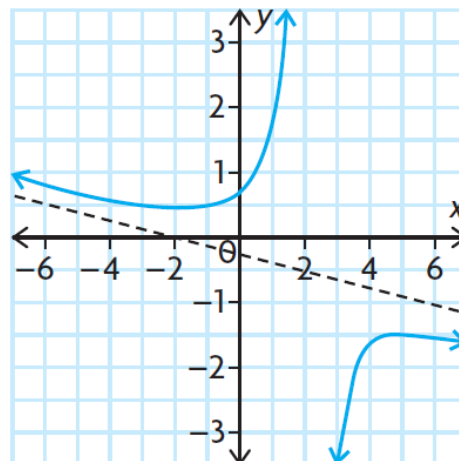
Nov 5-8:57 AM

Asymptotes:
So far we have vertical and horizontal.

NEW:

oblique asymptote

an asymptote that is neither
vertical nor horizontal, but
slanted

Nov 5-8:59 AM

Investigating the different graphs...

On the graphing calculators
    p259 Part F

Oct 31-2:01 PM

Summary:

   Hole: occurs when you get 0/0,
   ie the top and bottom have a common factor

   Vertical Asymptote: occurs when the
   denominator is equal to 0

   Oblique Asymptote: occurs when the top
   function is exactly on degree more than the
   bottom function

              See page 261 for full explanations

Oct 31-2:04 PM

NOTE:
     horizontal asymptotes:
-Any constant numerator and polynomial
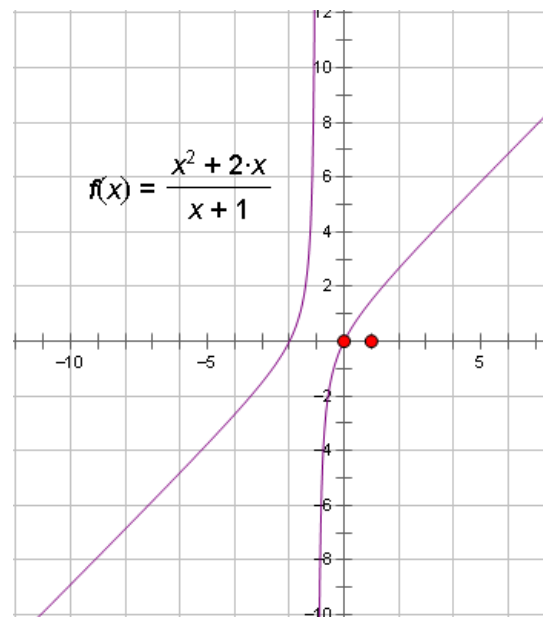denominator has HA of y=0
-Any linear/linear the HA is y=a/b

     oblique asymptotes:
-find by dividing top by denominator using
polynomial division (the answer is the equation
of the line of the asymptote - ignore the
remainder)

<div align="center">Nov 1-3:12 PM</div>

Example of oblique asymptote.

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

<div align="center">Apr 8-3:25 PM</div>

HW
Read over summary page on p261
Questions:
    p262 #1, 2acegij

Oct 31-2:09 PM