

Pathways Reading Guide M6 Section 2

Please read Module 6, section 2 in your ebook, pages 13 - 28 (click on module 6, then “Text”).

Be sure to read with a pencil in hand and attempt the examples before you read the solution given. Take notes of important definitions and ideas as you read. I don’t expect you to have 100% comprehension of everything in the section, but spending significant time trying to understand the main ideas will assist you as you work on the Investigation during our next class.

Questions to guide your reading:

- What does “behavior” mean when referring to the “end behavior” of a function?
- If a function has a horizontal asymptote, does that mean that the function actually has an input that produces an output value matching the asymptote? Can you think of a function that might actually “reach” its limit (hint: think very simple)?
- Limit notation is a concise way to summarize end behavior. Think about how the word limit is used in everyday life (eg the speed limit) – why do you think we refer to a horizontal asymptote as a limit?
- Think back and explain why we can approximate the end behavior of a polynomial by its leading term.
- What are the three cases for the end behavior of a rational function?
- State the meaning of DNE, and when you would say that a limit DNE. How else can we write this with limit notation?
- You only know how to find the limit of rational functions, but can you think of examples of other kinds of functions that might have limits (hint: module 4)? Try some on your calculator to see if you are correct.

The videos on pp. 14 and 19 are excellent.