

Math 110 (Section 002) Learning Objectives

Students should be able to do the following things by the end of each respective unit. Additions may be made as the term progresses.

Asymptotes

1. Explain, using a picture and rigorous but informal language, what the phrase $\lim_{x \rightarrow a} f(x) = L$ means if $a = \pm\infty$ or $L = \pm\infty$.
2. Define the terms 'vertical asymptote' and 'horizontal asymptote'.
3. Give examples of functions with vertical or horizontal asymptotes.
4. Given a function, identify its asymptotes.
5. State and apply l'Hospital's Rule on functions already in the appropriate form $\frac{f(x)}{g(x)}$.
6. Give some justification for l'Hospital's Rule.