

Lesson 2.1 - Limits of Function Values

OBJECTIVES:

- Estimate a limit using a numerical or graphical approach
- Know different ways a limit can fail to exist
- Evaluate a limit using the properties of limits
- Evaluate a limit analytically

CONTENT KNOWLEDGE

- The informal definition of limit
- When limits fail to exist
- One-sided vs. two-sided limits
- The limits of the identity & constant functions
- The properties of limits

Lesson 2.2 - Limits Involving Infinity

OBJECTIVES:

- Determine infinite limits from the left and from the right
- Evaluate infinite limits of rational functions

CONTENT KNOWLEDGE

- The informal definition of an infinite limit
- The process of finding limits by inspection as it applies to rational functions

Lesson 2.3 - The Sandwich Theorem & $\sin\theta/\theta$

OBJECTIVES:

- Evaluate a limit using the Sandwich Theorem
- Evaluate limits of the form $\sin\theta/\theta$

CONTENT KNOWLEDGE

- The limits of sine and cosine as $\theta \rightarrow 0$

Lesson 2.4 - Limits & Continuity

OBJECTIVES:

- Determine continuity at a point, on an open interval, and on a closed interval
- Determine when a discontinuity is removable

CONTENT KNOWLEDGE

- What it means for a function to be continuous
- The Continuity Test
- Removable vs. non-removable discontinuities