

**AP CALCULUS BC SUMMER WORKSHOP**  
**2023 Western Kentucky University**  
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DAY 1

- ✓ Introductions
- ✓ Why AP Calculus?
- ✓ An overview of the CED and what BC entails
- ✓ Resources Exploration
  - Delta Math
  - Master Math Mentor
  - Go Formative
  - Teachers Pay Teachers
  - Calc Medic
  
- ✓ Limits
  - Limits Joke activity
  - Four Corners activity
  - Limits Card Sort
  
- ✓ Continuity
  - Kahoot challenge
  - Piecewise Functions and Discontinuities activity
  
- ✓ Derivatives
  - Tangent Line scavenger hunt
  
- ✓ Derivatives of Parametric and Vector Functions
  - FRQ review
  - Circuit Training
  
- ✓ Derivatives of Polar Functions
  - MMM Acrostic practice

DAY 2

- ✓ AP Classroom
  - Best practices
  - Strategies

- ✓ Theorems in AP Calculus
  - IVT, EVT, MVT, Rolle's
  - Circuit Training
  - Desmos card sort
  
- ✓ L'Hospital's Rule
  - Justification
  - FRQ review
  
- ✓ Integrals/Riemann Sums
  - Paul Foerster labs
  - Socrative online quiz
  - Quizizz challenge
  
- ✓ Integral Topics in BC
  - Integration by Parts
  - Integration with Partial Fractions
  - Improper Integrals
  - Circuit Training
  - FRQ review

## DAY 3

- ✓ Differential Equations
  - Card Sort (by types of variables presented)
  - The Potato Problem
  - Slope Fields on Desmos
  - Logistic Functions
  - Euler's Method
  
- ✓ Integrals involving Parametric, Vector, and Polar Functions
  - Arc Length
  - Error Analysis
  - Polar Graph card sort
  - Circuit Training
  
- ✓ Series
  - Recognizing known series
  - Quizizz challenge

## DAY 4

- ✓ Series Convergence Tests
  - Nth Term Test
  - Direct Comparison Test
  - Limit Comparison Test
  - Ratio Test
  - Integral Test
  - Alternating Series Test
  - Card Sort challenge
  - “One of These Series is Not Like the Other” activity
  
- ✓ Power Series
  - Radius/Interval of Convergence
  - FRQ review
  - 5 for 5 activity
  - Taylor and Maclaurin Series
  - Series Sudoku
  - Circuit Training

## DAY 5

- ✓ Review Strategies for the AP Exam
  - Path to a Five
  - FRQ type study
  - Delta Math final wrap-up
  - Circuits
  
- ✓ Wrap-up