Summer Syllabus for AP Calculus BC

CHAPTER 1 LIMITS AND CONTINUITY

Appendix A: Trigonometry Review

Converting from degrees to radians
Angle Chart
Using right triangles
Evaluating all trigonometric functions
Finding the angle given the trigonometric value (Use $n\pi$ notation)

Assignment #1 pgs. A23-A24 #2-30 EVEN

1.1 Limits (An Intuitive Approach)

Tangent lines and limits
One-Sided Limits
Relationship between one-sided and two-sided limits
Vertical asymptotes

Assignment #2 pgs. 77-79 #1-10, 17-30

1.2 Computing Limits

Basis Limits
Properties of limits
Indeterminate form
Limits involving radicals
Limits involving piecewise-defined functions

Assignment #3 pgs. 87-88 #1-40
SHOW ALL WORK

1.3 Limits at Infinity: End Behavior of a Function

Limits at infinity and horizontal asymptotes
Limit laws for infinity
Polynomial functions as x increases without bound
Rational functions as x increases without bound
Limits involving radicals
Limits involving trigonometric, exponential, and logarithmic functions

Assignment #4 pgs. 96-99 #1-44, 55-62
JUSTIFY AND/OR SHOW WORK

1.5 Continuity

Definition of continuity
Continuity on an interval
Continuity from the left or right
Properties of continuous functions

Assignment #5 pgs. 118-119 #1-36
JUSTIFY YOUR ANSWERS

1.6 Continuity of Trigonometric and Inverse Functions

Continuity of trigonometric functions
Continuity of inverse functions
Squeezing theorem

Assignment #6 pgs. 125-126 #1-38, 50
SHOW ALL WORK

NOTE: ADDITIONAL SUPPLEMENTS WILL BE DISTRIBUTED AT THE SUMMER WORKSHOP

Summer Syllabus due the first day of school. This will count as your first test grade. Extra credit of 10 points will be awarded to completed summer syllabii submitted on or before the last day of the summer workshop.