AP Calculus AB Calendar: Unit 1 Limits (August – September) ***Name:*** _____

MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY
29 First Day of School! Review Definitions HW: (R) Parent Function Review Wkst	30 **Section P3. Review of Transformations** **Pre-Assessment** HW: (R) Pg. 27 #5—11 odd, 25, 27, 47—52 all, 55, 57, 63, 65, 93	31 **Unit Circle and Trig Review** HW: (R) Trig Worksheet	1 **Sections 1.2 & 1.3** HW: (R) Pg. 54 #5– 19 odd, 23, 25 Pg. 67: #3, 17, 25, 27, 31, 35, 37, 49, 53, 57, 59, 67, 73, 77, 83	2 QUIZ **Quiz: Pre-Calc Review** Section 1.3 & Continuity Lab HW: Complete previous day's assignment
5 ***LABOR DAY!*** ***NO SCHOOL*** 	6 **Section 1.4** (Continuity and One-Sided Limits) HW: (R) Pg. 78 #1—7 odd, 11, 17, 19, 35, 37, 41, 43, 45, 47, 59	7 **Sections 1.5 & 3.5** (Limits involving infinity) HW: (R) Pg. 88 #3, 7, 11, 23, 41, 43 & Pg. 205 #17, 21—33 odd	8 QUIZ **Quiz: 1.2 – 1.4** CW/HW: Puzzle Wksts: Limit Bingo & Asymptote/Discontinuity	9 ***EARLY RELEASE*** We Belong Together Lab HW: Complete previous day's assignment
12 **Five 'n' One** Review HW: Study for Test	13 Review (Limits and Tangents Lab) HW: Study for Test	14 **Unit 1 Test** 	15	**Tips for Success in AP Calculus:** **Study, ask questions and attend SMART Lunch**

(R) = Required Homework
(S) = Suggested Homework for extra practice

Enduring Understandings (Students will understand that…)	**Learning Objectives (Students will be able to…)**	**Essential Knowledge (Students will know that…)**
EU 1.1 The concept of a limit can be used to understand the behavior of functions.	LO 1.1A(a) Express limits symbolically using correct notation LO 1.1A(b) Interpret limits expressed symbolically	○ EK 1.1A1: Given a function, *f*, the limit of f(x) as x approaches c is a real number R if f(x) can be made arbitrarily close to R by taking x sufficiently close to c (but not equal to c). If the limit exists and is a real number, then the common notation is $\lim_{x \to c} f(x) = R$. ○ EK 1.1A2: The concept of a limit can be extended to include one-sided limits, limits at infinity, and infinite limits. ○ EK 1.1A3: A limit might not exist for some functions at particular values of x. Some ways that the limit might not exist are if the function is unbounded, if the function is oscillating near this value, or if the limit from the left does not equal the limit from the right.
	LO 1.1B Estimate limits of functions	○ EK 1.1B1: Numerical and graphical information can be used to estimate limits.
	LO 1.1 C Determine limits of functions	○ EK 1.1C1: Limits of sums, differences, products, quotients, and composite functions can be found using the basic theorems of limits and algebraic rules. ○ EK 1.1C2: The limit of a function may be found using algebraic manipulation, alternate forms of trigonometric functions, or the Squeeze Theorem. ○ EK 1.1C3: Limits of indeterminate forms $\frac{0}{0}$ and $\frac{\infty}{\infty}$ may be evaluated {using L'Hopital's Rule}.
	LO 1.1 D Deduce/interpret behavior of functions using limits	○ EK 1.1D1: Asymptotic and unbounded behavior of functions can be explained and described using limits. ○ EK 1.1D2: Relative magnitudes of functions and their rates of change can be compared using limits.
EU 1.2 Continuity is a key property of functions that is defined using limits	LO 1.2A Analyze functions for intervals of continuity or points of discontinuity	○ EK 1.2A1: A function, *f*, is continuous at x = c provided that f(c) exists, $\lim_{x \to c} f(x)$ exists, and $\lim_{x \to c} f(x) = f(c)$. ○ EK 1.2A2: Polynomial, rational, power, exponential, logarithmic, and trigonometric functions are continuous at all points of their domains. ○ EK 1.2A3: Types of discontinuities include removable discontinuities, jump discontinuities, and discontinuities due to vertical asymptotes.
	LO 1.2B Determine the applicability of important calculus theorems using continuity.	○ EK 1.2B1: Continuity is an essential condition for theorems such as the Intermediate Value Theorem, the {Extreme Value Theorem}, and the {Mean Value Theorem}.

{ } = will be covered in a later unit