AP Calculus AB
Assignment Guide
Fall Semester: 2016-17
Rev 9/16/2016

Day	Topic / Activity	Assignment
1	Distribute Books (for reference only), Google Calendar, Pacing Guide, CalcView, Graphing Calculator, Collect PreCalc Texts, Letter Home, Handouts: WS HW 1.2A; Textbook HW 1.2A	Letter Home: Signatures **Worksheet HW 1.2A – "Graphical Approach to Limits"** 1-18 all **Textbook HW 1.2A – pp. 72-73:** 2, 4, 8-28 even *(13 problems)* Both assignments due Day 2
2	**1.2A – Finding Limits Graphically** • **One-Sided Limits**	Khan Academy: Formal Definition of Limits (Epsilon-Delta) Then, watch example of Epsilon-Delta see CalcView 1.2 #37
3	**1.2B – Epsilon-Delta Definition of Limit**	Video: Epsilon-Delta **Worksheet HW 1.2B – "The Epsilon-Delta Definition of Limit"** 1-12 all; **Textbook HW 1.2B – p. 73:** 32-50 even *(10 problems)*; Use Graphing Calculator for #'s 32 & 34;
4	Grade WS HW 1.2A and WS HW 1.2B Quiz 1: Section 1.2 **1.3 – Evaluating Limits Analytically**	**Worksheet HW 1.3 – "Evaluating Limits Algebraically"** 1-31 all; ***Textbook HW 1.3 – pp. 84-85:** 12, 22, 36, 40-64 (multiples of 4), 84, 85, 94, 96 *(14 problems)*
5	**1.3 – Evaluating Limits Analytically** (continued)	TI-84 Activity: **Limits Enrichment** (Enrichment); Hour of Code: "10 Minutes of Code" by Texas Instruments
6	Q/A over HW 1.3 Grade WS HW 1.3 Quiz 2: Section 1.3	1.4 Lecture Notes WS HW 1.4 Textbook HW 1.4
7	**1.4 – Continuity** • **Definition of Continuity** • Khan Academy: Intermediate Value Theorem • **Finding Constraints that Guarantee Continuity**	**Worksheet HW 1.4 – "Continuity & The Intermediate Value Theorem"** 1-9 all **Textbook HW 1.4 – pp. 96-97:** 4-92 (multiples of 4) skip 56, 60 *(21 problems)*

8	Q/A over HW 1.4 Grade WS HW 1.4 **Quiz 3: Section 1.4** **1.5 – Infinite Limits**	**Worksheet HW 1.5 – "Infinite Limits"** 1-16 all ***Textbook HW 1.5 –** **pp. 105-106:** 16-60 (multiples of 4) (*12 problems*)
9	**1.6 – Limits at Infinity**	**Worksheet HW 1.6 – "Limits at Infinity"** 1-16 all ***Textbook HW 1.6 –** **pp. 116-117:** 14-44 (even) (*16 problems*) **Unit 1 Review Packet**
10	Q/A over HW 1.5 Grade WS HW 1.5 Q/A over HW 1.6 Grade WS HW 1.6 **Quiz 4: Section 1.5 & 1.6**	 **Unit 1 Review Packet**
11	**UNIT 1 EXAM** **(1.2A, 1.2B, 1.3, 1.4, 1.5, 1.6)**	**Worksheet**: Discovering the Derivative (using a graphing calculator)

12	**2.1 – The Derivative & The Tangent**
	     Line Problem
	    • **Definition of the Derivative**
		Worksheet HW 2.1A – "Definition of the Derivative" 1-12 all
		
		*Textbook HW 2.1 – **pp. 131-133:** 4-28 (multiples of 4),
		                      30-36 (even), 62-70 (even)
		                      72-84 (even) (*22 problems*)
		                      (72-84 must follow Day 15's Lesson)

13	**2.1 – The Derivative & The Tangent Line Problem** (continued)
	    • **Differentiability and Continuity**
		<u>**Worksheet HW 2.1B** – **"Differentiability"**</u> 1-12 all
		
		TI-84 Activity: **Continuity and Differentiability**
		       (Informative)

16	Q/A HW 2.1 Grade WS HW 2.1 **Quiz 5: Section 2.1**	

17	**2.2 – Basic Differentiation Rules**
	    • **Power Rule**
	    • **The Constant Multiple Rule**
		<u>**Worksheet HW 2.2A**</u> – **"Basic Differentiation Rules"** 1-21 all
		
		<u>***Textbook HW 2.2**</u> – **pp. 143-133:** 4-64 (multiples of 4),
		           90-98 (even) (*21 problems*)
		    (Many of the these problems follow Day 18's Lesson)

18	**2.2 – Basic Differentiation Rules**
	    (continued)
	    • **Derivatives of $\sin(x)$ and $\cos(x)$**
	    • **Derivatives of e^x**
	    • **Rates of Change**
		<u>**Worksheet HW 2.2B**</u> – **"Derivatives of sin(x), cos(x), e^x; Rates of Change"** 1-15 all

19	Q/A over HW 2.2	

20	Grade WS HW 2.2
	Quiz 6: Section 2.2
	2.3 – Product and Quotient Rules;
	    Higher Order Derivatives
	    • **Product Rule**
	    • **Quotient Rule**
	    • **Derivatives of Other Trig Functions**
		<u>**Worksheet HW 2.3**</u> – **"Product Rule, Quotient Rule and Higher Order Derivatives"** 1-44 all
		
		<u>***Textbook HW 2.3**</u> – **pp. 154-155:** 4-80 (multiples of 4), 88
		           (*21 problems*)

21	**2.3 – Product and Quotient Rules;**
	    Higher Order Derivatives
	    • **Higher Order Derivatives**
	    • **Derivatives of Absolute Value Functions**	

22	Grade WS HW 2.3	

23	**2.4 – The Chain Rule**	<u>**Worksheet HW 2.4A**</u> **– "The Chain Rule"** 1-35 all <u>***Textbook HW 2.4**</u> **–** pp. 154-155: 4-80 (multiples of 4), 88 (*21 problems*)
24	**2.4 – The Chain Rule** (continued)	<u>**Worksheet HW 2.4B**</u> **– "The Chain Rule – Transcendental Functions"** 1-24 all **Unit 2 Review Packet**
25	Grade WS HWs 2.4A and 2.4B	
26	**Quiz 8: Section 2.4** Review Unit 2	
27	**UNIT 2 EXAM** **(2.1, 2.2, 2.3, 2.4)**	
28	**2.5A – Indeterminate Forms and** **L'Hôpital's Rule**	<u>**Worksheet HW 2.5A**</u> **– "Indeterminate Forms and** **L'Hôpital's Rule"** 1-12 all There is no Textbook HW for 2.5A
29	Q/A HW 2.5A Grade WS HW 2.5A	
30	**Quiz 9: Section 2.5A** **2.5B – Particle Motion on a Straight Line**	<u>**Worksheet HW 2.5B**</u> **– "Straight Line Motion"** 1-17 all There is no Textbook HW for 2.5B
31	Q/A HW 2.5B Grade WS HW 2.5B	
32	**Quiz 10: Section 2.5B** **2.5C – Implicit Differentiation**	<u>**Worksheet HW 2.5C**</u> **– "Implicit Differentiation"** 1-23 all <u>***Textbook HW 2.5C**</u> **–** pp. 179-180: 4-54 (multiples of 4) (*14 problems*)
33	**2.5C – Implicit Differentiation** (continued)	
34	Q/A HW 2.5C Grade WS HW 2.5C **Quiz 11: Section 2.5C**	

35	**2.6 – Derivatives of Inverse Functions**	<u>**Worksheet HW 2.6**</u> **–** **"Derivatives of Inverse Functions"** 1-13 all <u>***Textbook HW 2.6**</u> **–** **pp. 186-187:** 2-14 (even), 24-48 (even) *(20 problems)* **Unit 3 Review Packet**
36	Q/A HW 2.5B Grade WS HW 2.5B	
37	**Quiz 12: Section 2.6** Review Unit 3	
38	**UNIT 3 EXAM** **(2.5A, 2.5B, 2.5C, 2.6)**	
39	**2.7A – Linear Approximations**	<u>**Worksheet HW 2.7A**</u> **– "Linear Approximations"** 1-8 all There is no Textbook HW for 2.7A
40	Q/A HW 2.7A Grade WS HW 2.7A	
41	**2.7B – Related Rates** • **Introduction** • **Area & Volume Problems**	<u>**Worksheet HW 2.7B**</u> **– "Related Rates"** 1-29 all <u>***Textbook HW 2.7**</u> **– pp. 194-196:** 4-36 (multiples of 4), 30, 38, *(11 problems)*
42	**2.7B – Related Rates** (continued) • **Pythagorean Theorem Problems** • **Cone Problems**	
43	**2.7B – Related Rates** (continued) • **Trigonometry Problems** • **Shadow Problems** • **More Challenging Problems**	**Unit 4 Review Packet**

44	Q/A HW 2.7A Grade WS HW 2.7A	
45	**Quiz 13: Section 2.7 (A&B)** Review Unit 4	
46	**UNIT 4 EXAM** **(2.7A, 2.7B)**	
47	**3.1 – Extrema on an Interval** • **Critical Numbers** • **Relative (Local) Extrema**	**Worksheet HW 3.1** – **"Extrema on a Closed Interval"** 1-16 all ***Textbook HW 3.1** – **pp. 217-218:** 4-60 (multiples of 4) (*15 problems*)
48	**3.1 – Extrema on an Interval** (continued) • **Absolute (Global) Extrema** Q/A HW 3.1	
49	Grade WS HW 3.1	
50	**Quiz 14: Section 3.1** **3.2 – Rolle's Theorem & The Mean** **Value Theorem** • **Rolle's Theorem**	**Worksheet HW 3.2** – **"Rolle's Theorem & The MVT"** 1-19 all ***Textbook HW 3.2** – **pp. 224-225:** 12-28 (multiples of 4) 40-56 (multiples of 4) (*10 problems*)
51	**3.2 – Rolle's Theorem & The Mean** **Value Theorem** (continued) • **The Mean Value Theorem**	TI-84 Activity: **Mean Value Theorem** (Enrichment)
52	Grade WS HW 3.2	
53	**Quiz 15: Section 3.2** **3.3 – Increasing/Decreasing Functions** **and the First Derivative Test**	**Worksheet HW 3.3** – **"Increasing/Decreasing Functions and** **The First Derivative Test"** 1-18 all ***Textbook HW 3.3** – **pp. 233-234:** 24-72 (multiples of 4) (*13 problems*)

54	**3.3 – Increasing/Decreasing Functions and the First Derivative Test** (continued) Q/A HW 3.3	
55	Grade WS HW 3.3 **Quiz 16: Section 3.3**	
56	**3.4 – Concavity and the Second Derivative Test for Extrema** • **Concavity**	<u>**Worksheet HW 3.4**</u> **– "Concavity and the Second Derivative Test"** 1-18 all <u>***Textbook HW 3.4**</u> **–** **pp. 242:** 4-56 (multiples of 4) (*14 problems*)
57	**3.4 – Concavity and the Second Derivative Test for Extrema** (continued) • **Second Derivative Test for Extrema**	**Unit 5 Review Packet** Watch Videos on Section 3.5 – Curve Sketching: A Summary & Function Analysis **3.5 – Curve Sketching: A Summary** **Function Analysis** (Flipped Lesson) <u>**Worksheet HW 3.5**</u> **– "Curve Sketching & Function Analysis"** 1-7 all * There is no Textbook HW for Section 3.5
58	Grade WS HW 3.4 **Quiz 17: Section 3.4**	
59	**UNIT 5 EXAM** **(3.1, 3.2, 3.3, 3.4)**	
60	Q/A HW 3.5 **3.6 - Optimization**	<u>**Worksheet HW 3.6**</u> **– "Optimization"** 1-17 all <u>***Textbook HW 3.6**</u> **–** **pp. 262-264:** 2, 8, 12, 14, 18, 20, 22, 26, 28, 30, 34, 36 (*12 problems*)
61	Grade WS HW 3.5 **3.6 – Optimization** (continued)	**Unit 6 Review Packet**
62	**3.6 – Optimization** (continued) Q/A WS HW 3.6	
63	Q/A WS HW 3.6 **Quiz 18: Section 3.6**	

64	**UNIT 6 EXAM** **(3.5, 3.6)**	Final Exam Review Packet 1
65	Review for Final Exam	Final Exam Review Packet 2
66	Review for Final Exam	
67	Review for Final Exam	
68	Review for Final Exam	
69	**FINAL EXAM**	

Math with Mr. Wood

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