

Mr Stephenson's Honors Calculus Assignments for 2011-2012 Quarter 1 (v. 11/18, 03:27)

Textbook: Larson, Calculus of a Single Variable, 7th Ed., Houghton Mifflin, Boston, 2002

This document's URL is <http://sks23cu.net/MT/FY12/Assignments/12Q1/assign12Q1HCalc.doc>

L := Lesson, C := C.Lab., Q := Quiz, T := Test, E := Exam, PE := Practice Exercises, CW := Classwork

**EVERY ASSIGNMENT INCLUDES READING THE TEXT SECTIONS COVERED.
(PLANNING) ENTRIES LATER THAN ORANGE HIGHLIGHT MAY CHANGE.**

Day	Date	Activity	Description
1	T8/30	No Class	Freshmen Only
2	W8/31	Admin	Info sheets, "Meet & Greet", Summer Assignment Due 9/12
3	R9/1	LP.1.1	The Graph of an Equation - Ex 1 PE: p.8: 1, 3, 9, 11, 15; Use Table of Values and Point Plotting
	F9/2 H	Holiday	Labor Day Recess
	M9/5 H	Holiday	Labor Day
4	T9/6	LP.1.2	Intercepts and Symmetry - Ex's 2-3 PE: p.8: 17-35 odds
5	W9/7	LP.1.3	Points of Intersection - Ex 5 PE: p.8: (59, 63-75, 81-85) odds; {ck P.1.1}
6	R9/8	LP.2.1	Linear Models PE: p.16: 1-17 odds, 23-43 e.o.o.
7	F9/9	LP.2.2	Ratios & Rates of Change, Graphing Linear Models, & \perp Lines PE: p.17: (49-55, 59-67, 69 w/o G.U., 71-73, 77, 95) odds; {ck P.1.2&3}
8	M9/12 Q	Q1-1 LP.3.1	Summer Assignment Functions, Notation, Domain & Range - Ex's 1-3 PE: p.27: 1-19 odds; {ck P.2.1}
9	T9/13	LP.3.2	Translations & Reflections; {ck P.2.2}
10	W9/14		PE: p.27: (21-37, 47-51) odds
11	R9/15	LP.3.3	Classification and Combinations of Functions - Ex's 4-5; Read pp.24-26 and see http://bit.ly/sks23cuMaths II.A.2 and II.A.3. PE: p.29: 52, (53-63) odds, 73-76; {ck P.3.1}
12	F9/16	L1.1.1	What is Calculus?; Read pp 40-46 PE: p.47: 1-8, 10-11; {ck P.3.2}
13	M9/19 Sub	CW-lines	Do worksheet, finding equations of lines, and submit at end of class.
14	T9/20	L1.2.1	Introduction to Limits - Ex's 1-2; (review: http://bit.ly/sks23cuRatFuncs) PE: p.54: 1-11 odds
15	W9/21 ER115	Review	
16	R9/22 T	Test 1-1	Covers Days 3-13
17	F9/23 Sub	CW-d+mp	Do distance and midpoint worksheet and submit at end of class.
18	M9/26	L1.2.2	Limits That Fail to Exist - Ex's 3-5; {ck P.3.3, 1.1.1} PE: p.54: 13-17 odds, 43-45, 49, 51, 52
19	T9/27	L1.3.1	Evaluating Limits Analytically – Ex's 1-8
20	W9/28 Sub		PE: p.65: (1-25, 37-61) odds Work on PE for HW on 9/27, CW on 9/28, and HW on 9/28.
21	R9/29	L1.3.2	The Squeeze Theorem - Ex's 9-10 PE: p.65: (25 27-35, 67-87) odds; {ck 1.2.1, 1.2.2}

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22	F9/30	L1.4.1	Continuity - Ex 1; Read pp. 68-69 PE: p.76: (1-19, 25-27) odds
23	M10/3 Q	Review	Trigonometry - see http://bit.ly/sks23cuMaths : II. B.
24	T10/4	L1.4.2	Continuity on a Closed Interval - Ex's 2-4; Read pp. 70-72 PE: p.76: (21-23, 27-31) odds
25	W10/5	L1.4.3	Properties of Continuity - Ex's 6-8; Read pp. 73-76; {ck 1.3.1, 1.3.2} PE: p.77: (33-53, 57-63, 69-71, 75-77, 83-87, 91) odds [n=23, 3 days]
26	R10/6	L1.4.4	{ck 1.4.1, 1.4.2}; CW: Work on Practice Exercises from Day 25; i.e.: PE: p.77: (33-53, 57-63, 69-71, 75-77, 83-87, 91) odds [n=23, 3 days]
27	F10/7 ProgRprt Sub	L1.4.5	Distribute Progress Reports; Classwork: Work on Practice Exercises from Day 25; i.e.: PE: p.77: (33-53, 57-63, 69-71, 75-77, 83-87, 91) odds [n=23, 3 days]
	M10/10 H	Holiday	Columbus Day
28	T10/11	L1.4.6	Q&A on 1.4.3-1.4.5 PE's.
29	W10/12 SrPhoto845 Sub	Quiz 1-2	Complete these exercises from your textbook without using a graphing calculator: p.36: (1-13, 17, 21-41, 47) odds; and p.38: (1-9) odds. [25 exercises over 5 days]
30	R10/13 Sub		For each exercise, in your handwriting:
31	F10/14 T Sub		<ul style="list-style-type: none"> • state the original question; • provide a complete solution: <ul style="list-style-type: none"> ○ show any formulas you use and indicate what their constants mean, ○ show all the work necessary (don't "do it in your head"), ○ and/or explain your thinking in complete English sentences; • make sure your solution: <ul style="list-style-type: none"> ○ leads logically to your final answer, and that ○ your final answer is exactly like the one in the back of the text.
32	M10/17 Sub		You may refer to your textbook and notebook and work in small groups.
33	T10/18 Sub		You will submit a complete packet in your handwriting on 10/19. Grading: 20 points for overall completeness and 16 points for each of 5 randomly selected exercises for a total of 100 points.
34	W10/19	L2.1.1	{ck 1.4.3-1.4.5 }; Submit Quiz 1-2 The Tangent Line Problem - Ex's 1-2 PE: p.101: (1-9 , (25-31) parts <i>a</i> only) odds; [9]
35	R10/20	L2.1.2	The Derivative of a Function = Slope of Tangent Line - Ex's 3-5 PE: p.102: (11-23, 33-37) odds; [10]
36	F10/21	L2.1.3	Differentiability and Continuity - Ex's 6-7 PE: p.102: (39-49, 61-79) odds
37	M10/24 MEPA	L2.2.1	Basic Differentiation Rules - Ex's 1-2, 5-7; {ck 2.1.1, 2.1.2 } PE: p.113: (1-17, 25-29) odds; [12]

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38	T10/25 Q MEPA Sub	Classwork	Begin work on Quarter Assessment open-response problems (work individual, but open book & take home; Due 11/2 at end of class): 1. A stone was thrown upward from the top of a cliff overlooking the ocean and its splash was observed 30/7 sec later. The stone's vertical velocity after 1 second was 21/5 m/sec. The stone's height in meters is modeled by $h(t) = -4.9t^2 + v_0t + h_0$, where v_0 is the initial velocity, h_0 is the initial height, and t is the time in seconds. (t^2 means t squared, $*$ means multiply, 2.54 cm/inch, 5280 ft/mile) a. What was the stone's initial vertical velocity in m/sec? b. How high is the cliff in meters? c. What was the stone's maximum height in feet above the ocean? d. What was the stone's velocity in miles per hour at impact? 2. Let (a,b) be an arbitrary point on $y = 1/x$, $x > 0$. a. Find the area of the triangle formed by the tangent line through (a,b) and the coordinate axes. b. Explain what the answer would be if $y = 1/(2x)$, $x > 0$. 3. Where are the functions $f(x) = \sin x $ and $g(x) = \sin x $ differentiable? Explain your answer fully. (Hint: What's the piecewise function definition of absolute value?)
39	W10/26 ER1145	L2.2.2	Basic Differentiation Rules - Ex 4 PE: p.113: (31-35, 39-49, 53a, 55a, 57-59, 63-71) odds; [n=18]
40	R10/27	L2.2.3 Classwork	Basic Differentiation Rules - Ex's 7,10 Work on Quarter Assessment open-response problems (work individual, but open book & take home; Due 11/2 at end of class).
41	F10/28	Review	Make a 2-sided review sheet in your handwriting to attach to the test.
	M10/31	No School	Snow Days; Work individual on Quarter Assessment open-response, open-book problems. Due 11/4 (Revised) .
	T11/1		
42	W11/2	Test 1-2	Covers Days 14-37
43	R11/3	Classwork	Work individual on Quarter Assessment open-response, open-book problems. Due at end of class Friday 11/4 .
44	F11/4 E		
45	M11/7 Sub	Study	
1	T11/8	L2.2.4	Basic Differentiation Rules - Ex 8; {ck 2.1.3, 2.2.1} PE: p.113: (19-23, 37, 51, 61) odds; [n=6]
2	W11/9 Grds 8am	L2.3.1	The Product and Quotient Rules - Ex's 1-6 PE: p.124: 1-15 odds; [n=8]
3	R11/10	L2.3.2	Watch http://www.learner.org/resources/series42.html : 3. Derivatives PE: p.124: 17-41 odds; [n=13]; {ck 2.2.2, 2.2.4}
4	F11/11	Holiday	Veteran's Day
5	M11/14 Sub	Study	
6	T11/15 Updts8am+	Q&A	Return graded work and answer questions.
7	W11/16 Updts-11am	Watch	http://www.learner.org/resources/series42.html : 2. The Law of Falling Bodies (from The Mechanical Universe)
8	R11/17	Watch	http://www.learner.org/resources/series42.html : 7. Integration (from The Mechanical Universe)
9	F11/18 Sub	Study	