CBGS Calculus Syllabus Chapter 5: pp. 321-402 **Logarithmic, Exponential and Other Transcendental Functions**

Student note: the last part of this syllabus actually taps part of Ch. 6: Differential Equations.

Day	Text (Ch./Sec.)	Topics	Homework				
1 3/9 (Fri.)	Ch. 5 (not in book) Sanderson's Review of Exponential and Logarithmic Functions	 Briefly discuss Ch. 4 Test Defining exponential expressions, equations, and functions Graphing exponential functions Defining logarithmic expressions 	Sanderson worksheet				
2 3/12 (Mon.)	Ch. 5 (not in book) Sanderson's Review of Exponential and Logarithmic Functions	 Graphs of logarithmic functions Properties of logarithms Solving exponential equations using logarithms 	pg. 329; nos. 11, 13, 14, 15, 21, 23, 25, 33				
3 3/13 (Tues.)	Ch. 5/Sec. 1 (pp. 322-331) "Logarithmic, Exponential, and other Transcendental Functions"	 Using derivatives to analyze the natural logarithmic function Practice finding derivatives of natural logarithmic functions (product rule, quotient rule, chain rule, tangent lines) 	pp. 329-330; nos. 41, 42, 45, 46, 47, 52, 54, 56, 57, 63, 64, 68, 70, 75, 77, 78, 80				
4 3/15 (Thur.)	Ch. 5/Sec. 1 (pp. 322-331) "Logarithmic, Exponential, and other Transcendental Functions"	 Using the properties of logarithms to ease differentiation Implicit differentiation with logarithms Logarithmic differentiation 	pp. 330; nos. 77, 78, 79, 80, 93 Complete Sanderson Worksheet				
5 3/20 (Tues.)	Ch. 5/ Sec. 2 (pp. 332-340) "The Natural Logarithmic Function: Integration"	 Integration that yields the natural logarithmic function Practicing integration for miscellaneous problems 	Complete Sanderson Worksheet				
6 3/22 (Thur.)	Ch. 5/ Sec. 4 (pp. 350-359) "Exponential Functions: Differentiation and Integration"	 Briefly on inverses (trig review) Derivatives of e^x Integrals of e^x Quiz Review 	pp. 356-358; nos. 1, 3, 5, 9, 11, 14, 21-24, 33, 37, 41, 46, 51, 54, 85, 87, 89, 91, 99, 101				
3/23 (Fri.)	No school—teacher workday						
7 3/26 (Mon.)	Ch. 5/ Secs. 1-4 Ch. 5/Sec. 5 "Bases Other than <i>e</i> and Applications"	 Quiz Expanding on the general properties of logarithms and properties of inverse functions 	pp. 366-367; nos. 40, 43, 45, 49, 51, 63, 65, 67, 70 Complete Sanderson Worksheet				

8 3/28 (Tues.)	Ch. 5/Sec. 6 (pp. 371-379) "Inverse Trigonometric Functions: Differentiation"	•	Review inverse trigonometric functions Derivatives of inverse trigonometric functions	pg. 377; nos. 19, 31, 43, 44, 46, 48, 55, 61
9 3/29 (Thur.)	Ch. 5/Sec. 7 (pp. 380-387) "Inverse Trigonometric Functions: Integration"	•	Integrals that yield the inverse trigonometric functions Practice with miscellaneous techniques of integration	pg. 385; nos. 11, 15, 17, 19, 31, 33, 35, 39 Complete Sanderson Worksheet

10 ?/? (.)	Ch. 6/Sec. 2 (pp. 413-420) "Differential Equations: Growth and Decay"	•	Solving seperable differential equations Applications of differential equations	Pg. 418; nos. 1-9 odd, 11-14, 18, 19, 21, 23, 26, 27, 41, 61, 62
11 ?/? (.)	Ch. 6/Sec. 1 (pg. 404-412) "Slope Fields and Euler's Method"	•	Slope Fields	pg. 409-410; nos. 1-3, 25, 27, 40, 42, 53-56, 59 possible Sanderson worksheet
12 ?/? (.)		•	Review	TBA
13 ?/? (.)	Ch. 5	•	Test	