**5.1 The Natural Logarithmic Function: Differentiation**

Day 1 P 329 # 3 – 45 by 3’s,

Day 2 pg 330 # 48 – 63 by 3’s and 72, 74, 77, 80, 82, 83, 87, 93, 95, 103, 104

**5.2 The Natural Logarithmic Function: Integration**

Day 1 P 338 #3 – 45 by 3’s,

Day 2 pg 339 #48, 52, 61, 63, 64, 69, 71,72, 75, 80, 87, 93

**5.3 Inverse Functions**

P 347 # 1-21EOO, 24, 25, 28, 29, 33, 36, 42, 44, 46, 48, 62, 64, , 67, 81, 85, 101-104

**5.4 Exponential Functions: Differentiation and Integration**

P 356 # 3 – 42 by 3’s, Day 2 pg 357 45, 50, 53, 58, 61, 65, 69, 72, 74, 82, 85 – 107 odd, 113,117

**5.5 Base Other than e and Applications**

P 366 # 3 – 45 by 3’s, Day 2 pg 367 46, 50, 55, 58, 61, 64, 66, 71, 79, 80, 85, 89, 101-106

**5.6 Inverse** T**rigonometric Functions: Differentiation**

P 377 # 3-45 by 3’s, Day 2 48-65 by 3’s, 71-77odd, 81, 91

**5.7 Inverse Trigonometric Functions: Integration**

P 385 # 1-45 by 3’s, 53, 54, 65, 70

**February/March**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Monday** | **Tuesday** | **Wednesday** | **Thursday** | **Friday** |
| 10  5.1 | **11**  5.1 | **12**  **5.2** | **13**  5.2 | **14**  5.3 |
| **17**  No school | **18**  5.3 | **19**  5.3 | **20**  5.4 | **21**  5.4 |
| **24**  **5.5**  AIMS Writing | **25**  5.5  AIMS Reading | **26**  5.5 | **27**  EP  5.1 – 5.5 Applications test | **28**  5.1 – 5.5 SkillTest |
| **3/3**  5.6 | **4**  5.6 | **5**  5.7 | **6**  5.7 | **7 ER** |
| **10**  5.7  5.6 HW due | **11**  5.7 | **12**  5.6 – 5.7 Applications Test | **13 Conferences**  5.6 – 5.7 skills test | **14**  5.6 – 5.7 skills Test |
| **17.**    **Spring Break** | **18** | **19** | **20** | **21** |

**AP Calculus AB  
Chapter 5**

**Logarithmic and Trigonometric Functions**

**Blooms Verb for the unit**

* Determine efficient ways to integrate and differentiate transcendental functions.
* Solve real life problems with differentiation and integration of transcendental functions.

**Performance Objectives (No State Standards)**

**5.1 The Natural Logarithmic Function: Differentiation**

* Find the derivative involving the natural log funtion.
* Use the log function to find derivatives

**5.2 The Natural Logarithmic Function: Integration**

* Use the Log Rule for Integration to integrate a rational function
* Integrate Trig functions.

**5.3 Inverse Functions**

* Verify that one function is the inverse function of another function.
* Determine whether a function has an inverse function
* Find the derivative of an inverse function.

**5.4 Exponential Functions: Differentiation and Integration**

* Develop properties of the natural exponential function.
* Differentiate and Integrate exponential functions

**5.5 Bases other than e and Applications**

* Differentiate and Integrate exponential functions other than e.
* Use exponential functions to model compound interest and exponential growth.

**5.6 Inverse Trig Functions: Differentiation**

* Differentiate an inverse trig function.
* Differentiate all elementary functions.

**5.7 Inverse Trig Functions: Integration**

* Integrate functions whose antiderivatives involve inverse trig functions.
* Use the method of completing the square to integrate a function
* Integrate all elementary functions.

**21st Century Skills**

**Group Homework Quiz**

**Critical Thinking**

Students will solve problems together.

**Communication/Collaboration.**

Students will peer review other students work before it is submitted for grading.

|  |  |
| --- | --- |
| **Enduring Understanding**  **How are can a variety of functions be differentiated and integrated effieciently?** | **Essential Questions**  **How long does it take a substance to cool?** |

**Evidence of Understanding**

|  |  |  |
| --- | --- | --- |
| **Quizzes (Formative)**   * White Boards (Observation) * Bellwork (Numerical Data) * Spot Checks * Survey Student about strengths and weaknesses * Questioning strategies * Teacher observing student interaction during group work   **Test (Summative)**  2 summative tests  5.1 – 5.5  5.6-5.7 | **Student Self-Assessment**  Re-take Policy: Student Self-Assessment have to write the concepts that were most difficult on the test. Then make a plan of action to learn those concepts before assessing their knowledge again | **Academic Prompts**  How do you undo a derivative?  Explain the difference between an indefinite and a definite integral.  Explain the various methods for integrating and when they are most appropriate to use. |