| AP Calculus AB Pacing Chart -- Riddle |  |  |  |
| :---: | :---: | :---: | :---: |
|  |  |  |  |
| Date | \# of Days | Section/topic | Course Description |
| Review |  |  |  |
|  | 1 | Basic Functions and Domain, Range, and Symmetry |  |
|  | 1 | Families of Functions |  |
|  | 1 | Vertical and Horizontal Asymptotes, Holes and End Behavior |  |
|  | 1 | Piecewise Functions |  |
|  | 1 | Trig Functions and Unit Circle |  |
| 5 |  | TOTAL DAYS |  |
| Limits and Their Properties |  |  |  |
|  | 2 | 1.1 Preview of Calculus |  |
|  | 1 | 1.2 Finding limits graphically and numerically | 1B1, 1B3 |
|  | 2 | 1.3 Evaluating Limits Analytically | 1B2 |
|  | 2 | 1.4 Continuity and one-sided limits, IVT | 1D1, 1D2, 1D3 |
|  | 2 | 1.5 Infinite Limits, asymptotes | 1C1, 1C2 |
|  | 1 | 3.5 Limits at Infinity (Include with Chapter 1) | 1C1, 1C2 |
|  | 2 | Supplement: dominance | 1 C 3 |
|  | 4 | Catch-up, Sum up, review and test |  |
|  | 16 | TOTAL DAYS |  |
| Differentiation |  |  |  |
|  | 3 | 2.1 The Derivative and the Tangent Line Problem | $\begin{gathered} \hline 2 \mathrm{~A} 1,2 \mathrm{~A} 3,2 \mathrm{~A} 4, \\ 2 \mathrm{~B} 1 \\ \hline \end{gathered}$ |
|  | 3 | 2.2 Basic Differentiation Rules and Rates of Change | $\begin{gathered} \hline 2 \mathrm{~A} 2,2 \mathrm{~B} 4,2 \mathrm{E} 5, \\ 2 \mathrm{~F} 1,2 \mathrm{~F} 2, \end{gathered}$ |
|  | 2 | 2.3 Product \& Quotient Rules Higher Order Derivatives | $\begin{gathered} 2 F 2,2 D 1,2 \mathrm{D} 2, \\ 2 \mathrm{D} 3,2 \mathrm{E} 5 \\ \hline \end{gathered}$ |
|  | 2 | 2.4 The Chain Rule | 2F3 |
|  | 3 | 2.5 Implicit Differentiation | 2F3 |
|  | 3 | 2.6 Related Rates | 2C4, 2E3 |
|  | 4 | Catch up, Sum up, review and tests |  |
|  | 20 | TOTAL DAYS |  |
| Applications of Differentiation |  |  |  |
|  | 3 | 3.1 Extrema on an Interval, EVT | 1D3, 2B1, 2E2, 2E1 |
|  | 2 | 3.2 Rolle's theorem, the Mean Value Theorem | 2B3 |
|  | 3 | 3.3 increasing/Decreasing functions, First Derivative Test | 2B1, 2C1, 2C2 |
|  | 2 | 3.4 Concavity and the Second Derivative Test | 2D1, 2D2, 2D3 |
|  | 3 | 3.6 Summary of Curve Sketching | 1A and above |
|  | 3 | 3.7 Optimization Problems | 2E2 |


|  | 2 | Supplement Motion Problems, | 2E5 |
| :---: | :---: | :---: | :---: |
|  | 2 | 3.9 Differentials | 2B2, |
|  | 3 | Catch up, Sum up, review and tests |  |
|  | 23 | TOTAL DAYS |  |
| Integration |  |  |  |
|  | 4 | 4.1 Antiderivatives and Indefinite Integrals | 3D1, |
|  | 3 | 4.2 Area | 3B1, |
|  | 2 | 4.3 Riemann sums and Definite Integrals | 3A1, 3A3, |
|  | 2 | 4.4 The Fundamental Theorem of Calculus | 3C1, 3C2, 3B3 |
|  | 2 | 4.5 Integration by Substitution | 3D2 |
|  | 3 | 4.6 Numerical Integration | 3 F |
|  | 2 | Supplement Rate and Accumulation | 3 A 2 |
|  | 2 | Sum up, review and tests |  |
|  | 20 | TOTAL DAYS |  |
| Logarithmic, Exponential and Other Transcendental Functions |  |  |  |
|  | 1 | 5.1 The Natural Logarithm Function - Differentiation | 2F1 |
|  | 1 | 5.2 The Natural Logarithm Function - Integration | 3D1, 3D2 |
|  | 2 | 5.3 Inverse Functions | 20000 |
|  | 2 | 5.4 Exponential Functions: Differentiation and Integration | 2F1, 3D1, 3D2 |
|  | 2 | 5.5 Bases other than e and Applications | 2F1, 3D1 |
|  | 2 | 5.6 Inverse Trig Functions: Differentiation | 2F1 |
|  | 1 | 5.7 Inverse Trig Functions: Integration | 300 |
|  | 2 | Sum up, review and test |  |
|  | 13 | TOTAL DAYS |  |
| Differential Equations |  |  |  |
|  | 3 | 6.1 Slope Fields and Euler's Method | 2E6, |
|  | 2 | 6.2 Differential Equations: Growth and Decay | 3E1, 3E2 |
|  | 3 | 6.3 Separation of Variables and the Logistic Equation | 300 |
|  | 3 | Sum up, review and test |  |
|  | 11 | TOTAL DAYS |  |
| Applications of Integration |  |  |  |
|  | 2 | 7.1 Area of the Region Between Two Curves | 3A2, 3B1, 3B5 |
|  | 4 | 7.2 Volume: the Disk Method | 3B2 |
|  | 4 | Sum up, review and test |  |
|  | 10 | TOTAL DAYS |  |
| Date | \# of Days | Exam Review |  |
|  | 1 | Format of Test; exam hints, etc. |  |
|  | 2 | Multiple-choice - no calculator |  |
|  | 2 | Multiple-choice - calculator |  |
|  | 2 | Free-response - Area Volume |  |
|  | 2 | Free-response - Differential Equations |  |
|  | 2 | Free-response - Table Questions |  |
|  | 2 | Free-response - Graph Stems |  |
|  | 2 | Free-response - Rate / Accumulation |  |


|  | 2 | Free-response - Motion |  |
| :--- | :---: | :--- | :--- |
|  | 4 | Simulated Exam 1 |  |
|  | 4 | Simulated Exam 2 (if time allows) |  |
|  | 2 | Miscellaneous. |  |
|  | 27 | TOTAL |  |
|  |  |  |  |
|  | 145 | Total Class Days |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |

