

| <i>UNIT</i> | <i>WEEK</i> | <i>AP BENCHMARKS</i> | <i>INSTRUCTIONAL MATERIALS</i> | <i>ASSESSMENT</i> | ✓ |
|---|-------------|---|---|---|---|
| Introductory topics | 1-3 | 1. Functions 2. Models 3. Families of functions | Anton Textbook pp. 1-93, 103-106 Swokowski Textbook pp. 3-11, 30-38, 47-49 Finney Textbook, pp 1-19, 41-51. Old AP Free Response Questions. (1969-present) | Weekly Tests in AP Format (Multiple choice and Free-response) | |
| Limits and Continuity | 4-5 | 1. Limits a)Intuitively b)Computational c)Rigorous 2. Continuity a)At a point b)Functions c)Piecewise | Anton pp. 112-167 Finney pp. 55-81 Swokowski pp. 376-379 Barron's Set 2 | Weekly Test in AP Format | |
| Derivative | 6-8 | 1. Derivative as a tangent line 2. Derivative by definition 3. Techniques of differentiation 4. Derivatives of trig functions 5. Chain Rule 6. Differentials | Anton pp. 170 - 220 Finney pp. 82 - 149 Swokowski pp. 380-388, 113-118 Barron's Set 3 | Weekly Test in AP Format Biweekly sheets (6 AP Free –Response questions) with Hat Trick Quiz | |
| Logarithmic Exponential and Inverse Trig Functions | 9-10 | 1.Inverse functions 2.Logarithmic functions 3.Exponential functions 4. Inverse trig functions 5. Derivatives 6. Implicit differentiation | Anton pp. 226 – 269 Finney pp. 32 – 39, 149 – 175 Swokowski pp. 118 – 123 Barron's Sets 2 and 3 | Weekly Test in AP Format Biweekly sheets (6 AP Free –Response questions) with Hat Trick Quiz Quarterfinal Exam in AP Format | |

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| Related Rates | 11-12 | Related Rates L'Hopital's Rule | Anton pp. 270 – 287 Finney pp. 232 – 245 Barron's Set 4 | Weekly Test in AP Format Biweekly sheets (6 AP Free –Response questions) with Hat Trick Quiz | |
| Analysis of Functions | 13 | 1. Increase, Decrease, Concavity 2. Relative Extrema 3. First and Second Derivative Tests 4. Use of Technology | Anton pp. 290 – 323 | Weekly Test in AP Format Biweekly sheets (6 AP Free –Response questions) with Hat Trick Quiz | |
| Application of the Derivative | 14-16 | 1. Maximum and Minimum (2.11.1) 2. Rectilinear Motion 3. Newton's Method 4. Mean Value Theorem | Anton pp. 330-376 Finney pp. 206- 232 Barron's Set 4 | Weekly Test in AP Format Biweekly sheets (6 AP Free –Response questions) with Hat Trick Quiz | |
| Integration | 17-22 | 1. Indefinite Integral 2. Integration U-Substitution 3. Sigma Notation 4. Definite Integral 5. Fundamental Theorem of Calculus 6. Average Value | Anton pp. 378 – 457 Finney pp. 315 – 323, 268 – 276 Swokowski pp. 206 – 228, 246 – 253 | Weekly Test in AP Format Biweekly sheets (6 AP Free –Response questions) with Hat Trick Quiz Quarterfinal Exam in AP Format | |
| Applications of Definite Integral | 23-25 | 1. Area between two curves 2. Volumes of revolution a) Disks b) Washers c) Shells | Anton pp. 262 – 282 Finney pp. 374 – 394 Swokowski pp. 304, 265 – 280 Barron's Set 7 | Weekly Test in AP Format Biweekly sheets (6 AP Free –Response questions) with Hat Trick Quiz | |

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|--|-------------|---|---|---|---|
| Differential Equations | 26 | 1. Slope Fields 2. Differential Equations by Separation of Variables | Anton pp. 580 – 592 Finney pp. 320 – 323 Barron’s Set 9 | Weekly Test in AP Format Biweekly sheets (6 AP Free –Response questions) with Hat Trick Quiz | |
| Integration by Parts and Special Integrals | 27 | 1. Integration by Parts 2. Special Integrals | Anton pp. 516 – 530 Finney pp. 323 – 329 Swokowski pp. 415 - 424 | Weekly Test in AP Format Biweekly sheets (6 AP Free –Response questions) with Hat Trick Quiz Quarterfinal Exam in AP Format | |
| Exponential Growth and Decay and Final Topics | 28 | 1. Exponential Growth and Decay (2.11.2) 2. Work | Swokowski pp. 364 – 369 Barron’s Set 9 | Weekly Test in AP Format Biweekly sheets (6 AP Free –Response questions) with Hat Trick Quiz | |
| Review for AP Exam | 29-32 | Review all topics | Lederman sample exams Teacher-made review packet Old AP Free-Resonse questions 1985 Released AP Exam | Weekly Test in AP Format Biweekly sheets (6 AP Free –Response questions) with Hat Trick Quiz Quarterfinal Exam in AP Format | |

UPPER MERION AREA HIGH SCHOOL

MATHEMATICS DEPARTMENT

INSTRUCTIONAL PLANNING GUIDE

AP CALCULUS AB

ANTON CALCULUS 6TH EDITION (BRIEF)

FINNEY, et.al. CALCULUS

SWOKOWSKI CALCULUS

BARRON'S AP CALCULUS 7TH EDITION

LEDERMAN PREP. FOR AP CALCULUS

EXAM 7TH EDITION

