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| **AP Calculus Assignment Sheet****Unit 2: Derivatives (Ch3. Part 1)*****(All dates and assignments subject to change)*** |
| **Date Assigned** | **Section** | **Assignments –** *Online MathXLfor Schools. Questions listed need to be completed in your notebook.*  | **Objectives** |
| 8/29 | 3.1 | #16 3.1.9; 3.1.25; 3.1.47 | * Know and use the definition of Rate of Change and Slope of the tangent line.
* Write the equation of a tangent line.
* Know and use the definition of derivative of a function.
* Use all forms of derivative notation.
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| 8/30 | 3.1 | #17 3.1.29; 3.1.53; 3.1.63 |
| 8/31 | 3.2 | #18 3.2.5; 3.2.9; 3.2.27 | * Sketch graphs of derivative given a function graph.
* Sketch graphs of functions given derivative graphs.
* Understand the relationship between differentiable functions and continuous functions.
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| 9/1 | 3.2 | #19 3.2.6; 3.2.10; 3.2.32 |
| 9/2 | 3.3**(mini-quiz)** | #20 3.3.7; 3.3.21; 3.3.27 | * Find derivatives of constants and polynomials.
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| 9/5 |  | Labor Day!!! |  |
| 9/6 | 3.3 | #21 3.3.16; 3.3.69 | * Use the Sum/Difference Rule to find derivatives
* Know and use the derivative of the natural exponential function
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| 9/7 | 3.3 | #22 3.3.36; 3.3.49; 3.3.58 | * Determine the equations of tangent lines.
* Determine higher order derivatives.
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| 9/8 | 3.4 | #23 3.4.10; 3.4.18; 3.4.20 | * Know and use the product rule for derivatives.
* Know and use the quotient rule for derivatives.
* Know and use the derivative of $e^{kx}$
* Combine and use the product and quotient rule.
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| 9/9 | 3.4 | #24 3.4.47; 3.4.58; 3.4.70 |
| 9/12 | 3.4 | #25 3.4.33; 3.4.80 | * Apply derivatives and rules to real world problems.
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| 9/13 | 3.5**(mini-quiz)** | #26 3.5.19; 3.5.41; 3.5.49 | * Know and use the derivatives of sine and cosine.
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| 9/14 | 3.5 | #27 3.5.29; 3.5.36; 3.5.62 | * Know and use the derivatives of tangent/cotangent and secant/cosecant
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| 9/15 | 3.6 | #28 3.6.15; 3.6.22; 3.6.29 | * Apply derivatives and rules of derivatives to rate of change problems (motion problems)
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| 9/16 | 3.6 | #29 3.6.17; 3.6.31 | * Apply derivatives and rules of derivatives to rate of change problems (growth/decay problems)
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| 9/19 | 3.6 | #30 3.6.13; 3.6.39 | * Apply derivatives and rules of derivatives to rate of change problems.
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| 9/20 | Review | #31 Study Guide WS | *Review all the objectives listed above.* |
| 9/21 | Test | Keep Studying ☺ | *Showcase your calculus knowledge* ***with a calculator*** |
| 9/22 | Test  | No Homework | *Showcase your calculus knowledge* ***without a calculator*** |

\*\* Problems listed on the assignment sheet need to be copied and worked out in your notebook. Be prepared to discuss them the following class period\*\*

