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| D.Q.’s | Name | Pd. |
| AP Calculus AB: Derivatives (1) |
| ***Unit Essential Question****:* ***What is a limit and how do I solve them?*** |
| Day | Lesson | Assignment |
| Day 1FridayO8.17.18 | What is the formal definition of a derivative and how does it involve a limit?Standard: M.CALC.1.2 Derivatives: Define The learner will be able to approximate the rate of change at a point, given the graph of a function or a table of values. define the derivative of a function in various ways. The limit of the difference quotient. The slope of the tangent line at a point. Instantaneous rate of change. The limit of the average rate of change.Instruction: Go over homework, Discussion, & Group PracticeDifferentiation: Individual pacing/questions.  |  |
| Day 2MondayO8.2O.18 | What is the formal definition of a derivative and how does it involve a limit? Including Tangent Lines.Standard: M.CALC.1.2 Derivatives: Define The learner will be able to approximate the rate of change at a point, given the graph of a function or a table of values. define the derivative of a function in various ways. The limit of the difference quotient. The slope of the tangent line at a point. Instantaneous rate of change. The limit of the average rate of change.Instruction: Go over homework, Discussion, & Group PracticeDifferentiation: Individual pacing/questions.  | Supplement D22.7: Pgs. 150-51 5, 7, 18-20, 30, 33-382.8: Pg. 34a  |
| Day 3TuesdayO8.21.18 | How do you use the power rule to find the derivative of a function?Standard: : M.CALC.1.4 Differentiation: Use/Rules The learner will be able to use the rules of differentiation (power rule, product rule and quotient rule) with algebraic and transcendental functions.Instruction: Differentiation:  | 3.1: Pgs. 181-82 4-11, 13, 14, 16-20, 22, 23, 26, 29, 33-34 Plus 3 problems on back.D.Q. Formal Def.Derivative |
| Day 4WednesdayO8.22.18 | How do you use the product and quotient rule? Standard: M.CALC.1.4 Differentiation: Use/Rules The learner will be able to use the rules of differentiation (power rule, product rule and quotient rule) with algebraic and transcendental functions. Instruction: Differentiation: Individual pacing/questions.  | 3.2: Pgs. 189-903, 4, 6-9, 11, 15, 17, 22, 28, 32, 44, 47, 49, 50, Plus 1 problem on back  |
| Day 5ThursdayO8.23.18 | Derivatives of Trig. Function: How do you find the derivative of a trigometric function?Standard: M.CALC.1.21 Functions: Transcendental/Rules The learner will be able to apply the rules of integration to algebraic and transcendental functions. Instruction: Go over homework, Discussion, & Group PracticeDifferentiation: Individual pacing/questions.  | D.Q. Power RuleSupplement: D53.3: Pgs. 197-81-6, 8, 12, 21, 22, 29, 32, 33, 34, & 49 |
| Day 6FridayO8.24.18 | Derivatives Using Chain Rule: How do you find a derivative of a composite function? Standard: M.CALC.1.21 , M.CALC.1.5 Differentiation: Chain Rule The learner will be able to apply the chain rule to composite functions, and implicitly defined functions. Instruction: Go over homework, Discussion, & Group PracticeDifferentiation: Individual pacing/questions.  | D.Q. Product & QuotientSupplement: D63.4: Pg. 2057-15, 17-21 |
| Day 7MondayO8.27.18 | Derivatives Using Chain Rule: How do you find a derivative of a composite function? Standard: M.CALC.1.21 , M.CALC.1.5 Differentiation: Chain Rule The learner will be able to apply the chain rule to composite functions, and implicitly defined functions. Instruction: Go over homework, Discussion, & Group PracticeDifferentiation: Individual pacing/questions.  | D.Q. Trig. DerivativesSupplement: D73.4: Pgs. 205-716, 22-25, 29, 32, 33, 47, 63, 65, 84 a & b, & 86 |
| Day 8TuesdayO8.28.18 | Derivatives of Natural Logs & Exponentials: How do you take a derivative of a natural log function and Exponential functions?Standards: M.CALC.1.5 ,M.CALC.3.5 Integration: Natural Log The learner will be able to interpret the natural log ( ln x ) as the area under the curve of the function f(x) = 1/x. Instruction: Go over homework, Discussion, & Group PracticeDifferentiation: Individual pacing/questions | D.Q. Chain RuleSupplement: D8 |
| Day 9WednesdayO8.29.18 | How do you solve any kind of derivative?Standard: M.CALC.1.21 M.CALC.1.5 , M.CALC.1.6 **,**  M.CALC.3.5 Instruction: Go over homework, Discussion, & Group PracticeDifferentiation: Individual pacing/questions.  | ActivityReview for test |
| Day 10ThursdayO8.3O.18 | How do you solve any kind of derivative?Standard: M.CALC.1.21 M.CALC.1.5 , M.CALC.1.6 **,**  M.CALC.3.5 Instruction: Go over homework, Discussion, & Group PracticeDifferentiation: Individual pacing/questions.  | Review for Test |
| Day 11FridayO8.31.17 | How do you solve any kind of derivative?Standard: M.CALC.1.21 M.CALC.1.5 , M.CALC.1.6 **,**  M.CALC.3.5 Instruction: Go over homework, Discussion, & Group PracticeDifferentiation: Individual pacing/questions.  | Test: Derivatives  |

Notebook grade: 

Day 3

1.  Find 

2.  Find 

3. Find an equation of the tangent line to the curve at the given point.

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Day 4

1. Find  and . 