

| <b>Planned Course:</b> Honors Pre-Calculus | <b>Course Number:</b> M310H                               | <b>Department:</b> Math   |   |
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| <b>Unit:</b> Exponential Functions (5)     | <b>Grade Level:</b> 10-12                                 |   |   |
| <b>Estimated Time:</b>                     | <b>Level/Track:</b> Honors                                | <b>Date Approved:</b> August 26, 2019   |   |
| PA Academic Standards                      | *Core Concepts (in question format)<br>● Skills/Knowledge | Activities/Strategies/Study Skills<br>(identify some activities as remedial or enrichment activities) | Assessments<br>(include types and topics) |

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| <p><b>PA Core Standards:</b><br/> CC.2.2.HS.C.5 Construct and compare linear, quadratic, and exponential models to solve problems.<br/> CC.2.2.HS.D.8 Apply inverse operations to solve equations or formulas for a given variable.<br/> CC.2.2.HS.D.10 Represent, solve and interpret equations/inequalities and systems of equations/inequalities algebraically and graphically.</p> | <p>▶What are transcendental functions [nonalgebraic functions]? How can they be used to model and solve real-life problems?</p> <ul style="list-style-type: none"> <li>● Recognize and evaluate exponential functions of base a and of base e.</li> <li>● Use exponential functions to model real world problems.</li> <li>● Recognize and evaluate logarithmic functions with base a.</li> <li>● Recognize and evaluate the natural logarithmic function.</li> <li>● Use logarithmic functions to model and solve real world problems.</li> <li>● Use properties of logarithms to evaluate/rewrite and expand/condense logarithmic expressions.</li> <li>● Solve simple exponential and logarithmic equations.</li> </ul> | <p>▶Warm up problems<br/> ▶Repeated Calculation worksheets<br/> ▶Text book exercises<br/> ▶WebAssign Activities<br/> ▶MDC activities {simple vs. compound interest}</p> | <p>▶Quizzes prepared by teacher<br/> ▶Summative Unit test<br/> ▶Graded assignments<br/> ▶Formative Assessments</p> <ul style="list-style-type: none"> <li>● daily homework</li> <li>● classwork</li> <li>● questioning</li> <li>● exit tickets</li> </ul> |
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