



AHHS Advanced Precalculus YAG

2023- 2024



First Semester		Second Semester	
1 st Nine Weeks		3 rd Nine Weeks	
<p>TEKS P.1A, P.1B, P.1C, P.1D, P.1E, P.1F, P.1G, P.2A, P.2B, P.2C, P.2D, P.2E, P.2F, P.2G, P.2I, P.3A</p> <p>P.1A, P.1B, P.1C, P.1D, P.1E, P.1F, P.1G, P.2E, P.2G, P.2I, P.2J, P.2M, P.2N, P.5G, P.5H, P.5I, P.5L</p> <p>P.1A, P.1B, P.1C, P.1D, P.1E, P.1F, P.1G, P.2I, P.2N</p> <p>P.1A, P.1B, P.1C, P.1D, P.1E, P.1F, P.1G, P.2E, P.2G, P.2I, P.2J, P.2K, P.2L, P.2M, P.2N, P.5J</p>	<p>Unit 1: Functions and Mathematical Models (16 days)</p> <ul style="list-style-type: none"> Students will examine functions through multiple methods, as well as transformations of functions, inverses of function, and properties of functions. <p>Unit 2: Properties of Elementary Functions (15 days)</p> <ul style="list-style-type: none"> Students will examine exponential, logarithmic, power, and logistic functions algebraically, graphically, numerically, and verbally <p>Unit 3: Fitting Functions to Data (3 days)</p> <ul style="list-style-type: none"> Students will create regressions of various types to best fit a given data set. <p>Unit 4: Polynomial and Rational Functions Part 1 (4 days)</p> <ul style="list-style-type: none"> Students will explore properties of polynomial functions and connections between equations and graphs of polynomials. <p>Nine Weeks Exam/Review (2 days)</p>	<p>TEKS P.1A, P.1B, P.1C, P.1D, P.1E, P.1F, P.1G, P.2E, P.2G, P.2H, P.2I, P.2O, P.2P, P.4A, P.4B, P.4C, P.4D, P.4E, P.4F, P.5N</p> <p>P.1A, P.1B, P.1C, P.1D, P.1E, P.1F, P.1G, P.2H, P.2I, P.2O, P.2P, P.4A, P.4E, P.4F, P.5M, P.5N</p> <p>P.1A, P.1B, P.1C, P.1D, P.1E, P.1F, P.1G, P.2H, P.2I, P.2O, P.2P, P.4A, P.4E, P.4F, P.5M, P.5N</p> <p>P.1A, P.1B, P.1C, P.1D, P.1E, P.1F, P.1G, P.4E, P.4G, P.4H, P.4I, P.4J, P.4K</p>	<p>Unit 7: Applications of Trigonometric and Circular Functions (15 days)</p> <ul style="list-style-type: none"> Students will explore in-depth properties of sinusoidal, tangential, and secant functions as well as their relationships to the unit circle and one another. <p>Unit 8: Trigonometric Function Properties and Identities (13 days)</p> <ul style="list-style-type: none"> Students will explore in-depth properties of sinusoidal, tangential, and secant functions as well as their relationships to the unit circle and one another. <p>Unit 9: Properties of Combined Sinusoids (9 Days)</p> <ul style="list-style-type: none"> Students will explore additional properties that relate multiple circular functions. <p>Unit 10: Triangle Trigonometry Part 1 (6 Days)</p> <ul style="list-style-type: none"> Students will use properties previously learned to solve oblique triangle applications.



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2 nd Nine Weeks		4 th Nine Weeks	
<p>TEKS P.1A, P.1B, P.1C, P.1D, P.1E, P.1F, P.1G, P.2F, P.2G, P.2I, P.2J, P.2K, P.2L, P.2M, P.2N, P.5I</p> <p>P.1A, P.1B, P.1C, P.1D, P.1E, P.1F, P.1G, P.5A, P.5B, P.5C, P.5D, P.5E, P.5F</p> <p>P.1A, P.1B, P.1C, P.1D, P.1E, P.1F, P.1G, P.2G, P.2I, P.2O, P.2P, P.4C, P.4D, P.4E, P.4F</p>	<p>Unit 4: Polynomial and Rational Functions Part 2 (17 days)</p> <ul style="list-style-type: none"> Students will explore rational and polynomial functions and expressions (as well as their properties) through various methods. <p>Unit 5: Sequences and Series (8 days)</p> <ul style="list-style-type: none"> Students will express sequences and series through a multitude of methods and applications. <p>Unit 6: Periodic functions and Right Triangle Problems (12 days)</p> <ul style="list-style-type: none"> Students will explore sinusoidal functions graphically, algebraically, numerically, and conceptually. <p>Semester Exam/Review (6 Days)</p>	<p>TEKS P.1A, P.1B, P.1C, P.1D, P.1E, P.1F, P.1G, P.4E, P.4G, P.4H, P.4I, P.4J, P.4K</p> <p>P.1A, P.1B, P.1C, P.1D, P.1E, P.1F, P.1G, P.3D, P.3E, P.3G, P.3H, P.3I</p> <p>P.1A, P.1B, P.1C, P.1D, P.1E, P.1F, P.1G</p>	<p>Unit 10: Triangle Trigonometry Part 2 (8 Days)</p> <ul style="list-style-type: none"> Students will use properties previously learned to solve oblique triangle applications, as well as applications with vectors. <p>Unit 11: Conic Sections and Polar Systems (10 days)</p> <ul style="list-style-type: none"> Students will explore conic sections, their parametric representations, and their connection to polar coordinates. Students will explore basic polar functions and their properties. <p>Unit 12: Intro to Limits, Derivatives, and Integrals (18 days)</p> <ul style="list-style-type: none"> Students will explore limits, and their relationship to derivatives. <p>Semester Exam/Review (8 Days)</p>

Resources

1st Nine Weeks	2nd Nine Weeks	3rd Nine Weeks	4th Nine Weeks
Textbook: Precalculus with Trigonometry Concepts and Applications	Textbook: Precalculus with Trigonometry Concepts and Applications	Textbook: Precalculus with Trigonometry Concepts and Applications	Textbook: Precalculus with Trigonometry Concepts and Applications