Precalculus 2016-2017

Yap Seventh-Day Adventist School

Yearly Lesson Outline with NAD Standards

Holt, Precalculus, A Graphing Approach

Quarter 1

Chapter 1 – Number Patterns
PC.5.5 – Illustrate and explore characteristics and operations connecting sequences and series.
PC.6.6 – Demonstrate mathematical proficiency using a graphing utility.
PC.7.2 – Predict patterns and generalize trends.

Chapter 2 – Equations and Inequalities
PC.6.1 – Solve systems of equations and inequalities using graphs, algebraic methods, and matrices.
PC.6.2 – Solve higher order equations and inequalities from written and oral expression, recognizing equivalent forms.
PC.6.6 – Demonstrate mathematical proficiency using a graphing utility.

Chapter 3 – Functions and Graphs
PC.4.1 – Characterize, classify, and transform functions (even, odd, periodic, piece-wise, continuous, translations, stretches, compressions, and trigonometric).
PC.5.2 – Write, graph, and convert between different forms of equations (rectangular, polar, parametric).
PC.5.3 – Identify, graph, and interpret various expressions and functions (polynomial, inverse, trigonometric, logarithmic, exponential, vectors, etc.).
PC.6.4 – Perform operations involving polynomials, functions, rational expressions, vectors and matrices.
PC.6.6 – Demonstrate mathematical proficiency using a graphing utility.
PC.7.2 – Predict patterns and generalize trends.

Quarter 2

Chapter 4 – Polynomial and Rational Functions
PC.5.6 – Perform operations of complex numbers on the complex plane.
PC.6.4 – Perform operations involving polynomials, functions, rational expressions, vectors and matrices.
PC.6.6 – Demonstrate mathematical proficiency using a graphing utility.

Chapter 5 – Exponential and Logarithmic Functions
PC.5.3 – Identify, graph, and interpret various expressions and functions (polynomial, inverse, trigonometric, logarithmic, exponential, vectors, etc.).
PC.6.3 – Solve exponential, logarithmic, and trigonometric equations.
PC.6.6 – Demonstrate mathematical proficiency using a graphing utility.

Chapter 6 – Trigonometry
PC.5.1 – Simplify, verify, and derive trigonometric identities.

PC.5.3 – Identify, graph, and interpret various expressions and functions (polynomial, inverse, trigonometric, logarithmic, exponential, vectors, etc.).
PC.6.3 – Solve exponential, logarithmic, and trigonometric equations.
PC.6.6 – Demonstrate mathematical proficiency using a graphing utility.

Quarter 3

Chapter 11 – Analytic Geometry
PC.5.2 – Write, graph, and convert between different forms of equations (rectangular, polar, parametric).
PC.6.6 – Demonstrate mathematical proficiency using a graphing utility.
PC.7.3 – Analyze and write equations for conic sections.

Chapter 12 – Systems and Matricies
PC.6.1 – Solve systems of equations and inequalities using graphs, algebraic methods, and matrices.
"can do calculus": PC.6.5 – Decompose fractions into parts.
PC.6.4 – Perform operations involving polynomials, functions, rational expressions, vectors and matrices.
PC.6.6 – Demonstrate mathematical proficiency using a graphing utility.

Quarter 4

Chapter 13 – Statistics and Probability
PC.5.4 – Present and interpret data using statistics and probability (regressions, counting techniques).
PC.6.6 – Demonstrate mathematical proficiency using a graphing utility.

Chapter 14 – Limits and Continuity
PC.4.2 – Demonstrate knowledge of limits (definition, properties, finite, infinite).
PC.6.6 – Demonstrate mathematical proficiency using a graphing utility.

Based on the selection of problems throughout:

PC.7.1 – Find and interpret information from graphs, charts, and numerical data.
PC.7.4 – Judge meaning, utility, and reasonableness of findings in a variety of situations, including those carried out by technology.

Note: consult the "Interdependence of Chapters" on p. XII to see which you can skip. Consult the "Interdependence of Sections" at the beginning of each chapter to decide which sections you can skip.

Skipping

Chapter 7 – Trigonometric Graphs
PC.6.3 – Solve exponential, logarithmic, and trigonometric equations.
PC.6.6 – Demonstrate mathematical proficiency using a graphing utility.

Chapter 8 – Solving Trigonometric Equations
PC.6.3 – Solve exponential, logarithmic, and trigonometric equations.
PC.6.6 – Demonstrate mathematical proficiency using a graphing utility.

Chapter 9 – Trigonometric Identities and Proof
PC.5.1 – Simplify, verify, and derive trigonometric identities.

PC.6.3 – Solve exponential, logarithmic, and trigonometric equations.
PC.6.6 – Demonstrate mathematical proficiency using a graphing utility.

Chapter 10 – Trigonometric Applications
PC.5.3 – Identify, graph, and interpret various expressions and functions (polynomial, inverse, trigonometric, logarithmic, exponential, vectors, etc.).
PC.6.3 – Solve exponential, logarithmic, and trigonometric equations.
PC.6.6 – Demonstrate mathematical proficiency using a graphing utility.