Course Syllabus - Online Precalculus

Week	What to do during the week	What to turn in
Week 1	Chapter 1 ❏ Lesson 1: Sets, Real Numbers, Inequalities, etc. ❏ Lesson 2: Exponents and Radicals ❏ Lesson 3: Polynomials, Geometry Formulas ❏ Lesson 4: Equations, Quadratic Equations ❏ HW 1A ❏ Lesson 5: Mathematical Modeling ❏ Lesson 6: Mathematical Modeling ❏ HW 1B	HW 1A HW 1B
Week 2	❏ Lesson 7: Inequalities ❏ Lesson 8: Polynomial and other Inequalities ❏ HW 1C ❏ Lesson 9: Complex Numbers ❏ Lesson 10: The Number i, Negative Discriminants ❏ Lesson 11: Rectangular Coordinates ❏ HW 1D ❏ Lesson 12: Graphing Equations	HW 1C HW 1D
Week 3	❏ Lesson 13: Circles ❏ Lesson 14: Slope and Equations of Lines ❏ Lesson 15: Parallel and Perpendicular Lines ❏ HW 1E ❏ HW 1F and 1G (Honors) ❏ Chapter 1 Test	HW 1E HW 1F (Honors) HW 1G (Honors) Chapter 1 Test
Week 4	Chapter 2 ❏ Lesson 1: Definition of a Function ❏ Lesson 2: The Graph of a Function ❏ Lesson 3: Function Notation, Difference Quotients ❏ Lesson 4: Important Functions ❏ Lesson 5: Piecewise Functions ❏ HW 2A ❏ Lesson 6: Graphing Functions ❏ Lesson 7: Scaling a Graph Vertically ❏ Lesson 8: Combining Graphing Procedures ❏ HW 2B	HW 2A HW 2B
Week 5	❏ Lesson 9: Operations on Functions ❏ Lesson 10: Composite Functions ❏ HW 2C ❏ Lesson 11: One-to-one Functions ❏ Lesson 12: Inverse Functions ❏ Lesson 13: Mathematical Models ❏ Lesson 14: Mathematical Models ❏ HW 2D ❏ HW 2E, HW 2F (Honors) ❏ Chapter 2 Test	HW 2C HW 2D HW 2E (Honors) HW 2F (Honors) Chapter 2 Test
Week 6	Chapter 3 ❏ Lesson 1: Quadratic Functions ❏ Lesson 2: Graphing Quadratics ❏ Lesson 3: Applications ❏ HW 3A ❏ Lesson 4: Polynomial Functions	HW 3A

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Week	What to do during the week	What to turn in
Week 7	❑ Lesson 5: Graphing Polynomial Functions ❑ Lesson 6: Analyzing Graphs of Polynomials ❑ HW 3B ❑ Lesson 7: Rational Functions ❑ Lesson 8: Asymptotes	HW 3B
Week 8	❑ Lesson 9: Graphing Rational Functions ❑ Lesson 10: Graphing Rational Functions ❑ HW 3C ❑ Lesson 11: Division of Polynomials ❑ Lesson 12: Synthetic Division ❑ HW 3D ❑ Lesson 13: Zeros of a Polynomial	HW 3C HW 3D
Week 9	❑ Lesson 14: Finding Real Zeros ❑ Lesson 15: Approximating Real Zeros ❑ HW 3E ❑ Lesson 16: The Fundamental Theorem of Algebra ❑ Lesson 17: Complex Polynomials ❑ HW 3F and HW 3G (Honors) ❑ Chapter 3 Test	HW 3E HW 3F (Honors) HW 3G (Honors) Chapter 3 Test
Week 10	❑ Lesson 1: Exponential and Logarithmic Functions ❑ Lesson 2: The Base e ❑ Lesson 3: Logarithmic Functions ❑ Lesson 4: Graphs of Logarithmic Function ❑ HW 4A ❑ Lesson 5: Properties of Logarithms ❑ Lesson 6: Logarithms on a Calculator ❑ HW 4B	HW 4A HW 4B
Week 11	❑ Lesson 7: Logarithmic Equations ❑ Lesson 8: Exponential Equations ❑ HW 4C ❑ Lesson 9: Compound Interest ❑ Lesson 10: Compound Interest	HW 4C
Week 12	❑ Lesson 11: Growth and Decay ❑ Lesson 12: Radioactive Decay ❑ HW 4D ❑ Lesson 13: Logarithmic Scales ❑ HW 4E (Honors) ❑ Chapter 4 Test	HW 4D HW 4E (Honors) Chapter 4 Test
Week 13	Review for Exam	
Week 14	Semester 1 Exam	

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Week	What to do during the week	What to turn in
Week 15	Chapter 5 ❏ Lesson 1: Angles and Degrees ❏ HW 5A ❏ HW 5B ❏ Lesson 2: Circular Motion ❏ Lesson 3: The Unit Circle ❏ Lesson 4: Trig Functions of Common Angles ❏ Lesson 5: Domain and Range of Trig Functions ❏ HW 5C ❏ Lesson 6: Fundamental Identities	HW 5A HW 5B HW 5C
Week 16	❏ Lesson 7: Right Triangle Trigonometry ❏ Lesson 8: Reference Angles ❏ Lesson 9: Solving Right Triangles ❏ Lesson 10: Applications ❏ HW 5D ❏ Test on Chapter 5	HW 5D Chapter 5 Test
Week 17	Chapter 6 ❏ Lesson 1: Graphs of the Sine Function ❏ Lesson 2: Graphs of the Cosine Function ❏ Lesson 3: Sinusoidal Graphs ❏ HW 6A ❏ Lesson 4: Phase Shifts ❏ HW 6B ❏ Lesson 5: Combining Waves ❏ Lesson 6: Simple Harmonic Motion	HW 6A HW 6B
Week 18	❏ Lesson 7: Graphs of the Tangent Function ❏ Lesson 8: Graphs of Cosecant, Secant, Cotangent ❏ HW 6C ❏ Lesson 9: Inverse Sine ❏ Lesson 10: Inverse Cosine ❏ Lesson 11: Inverse Tangent ❏ Lesson 12: Expressions involving Trig Functions ❏ HW 6D ❏ Test on Chapter 6	HW 6C HW 6D Chapter 6 Test
Week 19	Chapter 7 ❏ Lesson 1: Trigonometric Identities ❏ HW 7A ❏ Lesson 2: Sum and Difference Formulas ❏ Lesson 3: Sum and Difference Formulas ❏ HW 7B ❏ HW 7C	HW 7A HW 7B HW 7C
Week 20	❏ Lesson 4: Double Angle Formulas ❏ Lesson 5: Half Angle Formulas ❏ HW 7D (Lesson 6 is deliberately omitted) ❏ Lesson 7: Trigonometric Equations ❏ Lesson 8: Trigonometric Equations ❏ HW 7E ❏ HW 7F (Honors) ❏ Test on Chapter 7	HW 7D HW 7E HW 7F Chapter 7 Test

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Week	What to do during the week	What to turn in
Week 21	Chapter 8 ❑ Lesson 1: The Law of Sines ❑ Lesson 2: The Ambiguous Case ❑ Lesson 3: Applications ❑ HW 8A ❑ HW 8B ❑ Lesson 4: The Law of Cosines	HW 8A HW 8B
Week 22	❑ Lesson 5: The Area of a Triangle ❑ HW 8C ❑ Lesson 6: Polar Coordinates ❑ Lesson 7: Polar and Rectangular Conversion ❑ HW 8D ❑ HW 8E ❑ HW 8F ❑ Lesson 8: Polar Equations and Graphs	HW 8C HW 8D HW 8E HW 8F
Week 23	❑ Lesson 9: Polar Equations and Graphs ❑ Lesson 10: Polar Equations and Graphs ❑ HW 8G ❑ HW 8H ❑ Lesson 11: Complex Numbers ❑ Lesson 12: DeMoivre's Theorem ❑ HW 8I ❑ Test on Chapter 8	HW 8G HW 8H HW 8I Chapter 8 Test
Week 24	Chapter 9 ❑ Lesson 1: Conic Sections ❑ Lesson 2: Parabolas ❑ Lesson 3: Translation of Parabolas ❑ HW9A	HW 9A
Week 25	❑ Lesson 4: Ellipses ❑ Lesson 5: Translation of Ellipses ❑ HW 9B ❑ Lesson 6: Hyperbolas ❑ Lesson 7: Translation of Hyperbolas ❑ HW 9C	HW 9B HW 9C
Week 26	❑ Lesson 8: The General Form of a Conic ❑ Lesson 9: Parametric Equations ❑ Lesson 10: Parametric Equations on a Calculator ❑ Test on Chapter 9	Chapter 9 Test
Week 27	Chapter 10 ❑ Lesson 1: Solving Systems ❑ Lesson 2: Solving Systems ❑ Lesson 3: Solving Systems ❑ HW 10A	HW 10A
Week 28	❑ Lesson 4: Matrix Notation ❑ Lesson 5: Echelon Form ❑ HW 10B Lesson 6: Determinants ❑ HW 10C	HW 10B HW 10C

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Week	What to do during the week	What to turn in
Week 29	❑ Lesson 7: Nonlinear Systems ❑ HW 10D ❑ Systems of Inequalities ❑ HW 10E ❑ HW 10F (Honors)	HW 10D HW 10E HW 10F (Honors) Chapter 10 Test
Week 30	Chapter 11 ❑ Lesson 1: Sequences, etc. ❑ Lesson 2: Recursion ❑ Lesson 3: Arithmetic Sequences and Series ❑ HW 11A	HW 11A
Week 31	❑ Lesson 4: Geometric Sequences and Series ❑ HW 11B ❑ Lesson 5: Mathematical Induction ❑ Lesson 6: The Binomial Theorem ❑ HW 11C	HW 11B HW 11C
Week 32	Second Semester Exam	