Unit 8: Polynomials and Complex Numbers

Relevant Course Objectives:
    CO3 (Polynomials and Complex Numbers): Perform arithmetic on polynomials and complex numbers to simplify algebraic expressions and analyze the structure of functions.

Essential Question:
    • **How can we predict the behavior of higher order polynomials?**

    • **Can a quadratic equation have solutions when the corresponding function has no x-intercepts?**

Week 25 March 28 - April 1

Monday - 8.1.1 Replacement
• HW 49
• Definition of a Polynomial
• Polynomial Graph Investigation

Notes: Definition of Polynomial

HW 49

Tuesday - 8.1.2
• HW 49
• Roots of Polynomial Functions
• Parents Graphs of Higher Order Polynomials (8-26 through 8-35)

Notes: End Behavior of Higher Order Polynomials

HW 50: Ch. 8 #8, 9, 11, 14 (8.1.1)

Thursday - 8.1.3
• HW 50
• Curve Fitting with Higher Order Polynomials (8-45 though 8-53)

HW 51: Ch. 8 #16, 17, 18, 19, 20 (8.1.1)

Unit 8 Assessments:

Summative: Unit 8 Test - Tuesday April 26

Unit 8: Polynomials and Complex Numbers

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Essential Question:
    • **How can we predict the behavior of higher order polynomials?**

    • **Can a quadratic equation have solutions when the corresponding function has no x-intercepts?**

Week 26 April 4 - 8

Monday - 8.2.1
• HW 51
• Imaginary Numbers
• Real and Complex Roots
• Roots vs. Zeroes

Notes: Imaginary and Complex Numbers

HW 52: Ch. 8 #36, 37, 38, 39, 44 (8.1.2)

Tuesday - 8.2.2
• HW 52
• Complex Roots
• Discriminant

Notes: Discriminant

HW 53: Ch. 8 #56, 57, 58, 60, 62 (8.1.3)

Thursday - 8.2.3
• HW 53
• Graphing Complex Numbers
• Algebraic Manipulation with Complex Numbers

Notes: Graphing Complex Numbers

HW 54: Ch. 8 #70, 71, 72, 73, 76, 77

Unit 8 Assessments:

Summative: Unit 8 Test - Tuesday April 26

Unit 8: Polynomials and Complex Numbers

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Essential Question:
    • **How can we predict the behavior of higher order polynomials?**

    • **Can a quadratic equation have solutions when the corresponding function has no x-intercepts?**

Week 27 April 11 - 15

Monday - 8.3.1/8.3.2
• HW 54
• Polynomial Division
• Determining the Factors and Integral Roots of Higher Order Polynomials

HW 55: Ch. 8 #93, 94, 95, 96 (8.2.2)

Tuesday - 8.3.3
• HW 55
• Applications of Higher Order Polynomials

HW 56: Ch. 8 #104, 105, 106, 107, 110 (8.2.3)

Thursday - Unit 8 Closure
• HW 56

HW: Unit 8 Study Guide (due after Break)

Unit 8 Assessments:

Summative: Unit 8 Test - Tuesday April 26

Unit 8: Polynomials and Complex Numbers

Relevant Course Objectives:
    CO3 (Polynomials and Complex Numbers): Perform arithmetic on polynomials and complex numbers to simplify algebraic expressions and analyze the structure of functions.

Essential Question:
    • **How can we predict the behavior of higher order polynomials?**

    • **Can a quadratic equation have solutions when the corresponding function has no x-intercepts?**

Week 28 April 25-29

Monday - Unit 8 Review
• Unit 8 Study Guide

HW: Unit 8 Extra Practice (choice of COs)

Tuesday - Unit 8 Test

HW: TBD

Thursday - TBD
• TBD

Unit 8 Assessments:

Summative: Unit 8 Test - Tuesday April 26