

**Unit 5: Inverses and Logarithms**

Relevant Course Objectives:

CO4 (Inverse Functions): Represent and verify inverse functions graphically and algebraically.

CO5 (Exponential Expressions and Logarithms): Derive and explain the structure of logarithms to solve problems involving exponential growth and decay.

**Essential Question:**

- **What is a logarithm?**
- **What does an inverse function look like algebraically and graphically?**

Week 13 November 30 - December 4

**Tuesday - Unit 4 Project (due Friday)**

**Wednesday - 5.1.1**

- Intro to Inverse Functions (5-2, 3, 4, 5, 6)

HW: Finish Unit 4 Project (due Friday)

**Friday - Unit 4 Quiz**

No HW (catch up on missing assignments)

**Unit 5 Assessments:**

Summative: Unit 5 Test - TBD

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Week 14 December 7 - 11**Tuesday - Inequalities Review**

- Go over quizzes
- Practice Problems

HW: Write up at least 1 of the 3 practice problems

**Wednesday - 5.1.2**

- Inverses Graphically (5-16, 17, 18)
- Will the inverse be a function? (5-20, 21, 23)

HW 28: Ch. 5 #8, 10, 11, 13, 15 (5.1.1)

**Friday - 5.1.3**

- Verifying Inverses Algebraically (5-40, 41, 42, 43, 44, 45)

Notes: Definition of Inverse Equations and Verifying Inverses Equations

HW 29: Ch. 5 #27, 32 (5.1.2) and #48, 50 (5.1.3)

**Unit 5 Assessments:**

Summative: Unit 5 Test - TBD

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Week 15 December 14 - 18**Tuesday - 5.2.1**

- Inverse of Exponential Functions (5-55, 56, 57, 58)
- Silent Board Game (5-68)

HW 30: Ch. 5 #61, 62, 64, 66, 67 (5.2.1)

**Wednesday - 5.2.2**

- Silent Board Game
- Logarithms (5-69, 70, 71, 72)

Notes: Logarithms

HW 31: Ch. 5 #74, 77, 78, 80 (5.2.2)

**Friday - Unit 4 Retake**

HW 32: Ch. 5 #84, 85, 90 (5.2.3) and #97, 98 (5.2.4)

**Unit 5 Assessments:**

Summative: Unit 5 Test - TBD

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Week 16 December 21 - 23

**Tuesday - Investigating Logarithms**

- TBD

HW 33: Ch. 5 #73 (5.2.2) and #99, 100, 102, 103

**Wednesday - No Class (Work Day)**

**Unit 5 Assessments:**

Summative: Unit 5 Test - TBD