



# Algebra II, First Semester (HMA1571B)

NDCDE Resources

---

Welcome: Start Here!

Tasks

---

Welcome

---

Course Information

Lessons

Module 01: Review of Algebra

---

01.01 Algebra 1 Review

01.01 Algebra 1 Review

01.02 Introduction to Functions

01.02 Introduction to Functions

Mid-Module Check

01.04 Graphing Linear Equations and Inequalities

01.04 Graphing Linear Equations and Inequalities

01.05 Writing the Equation of a Line

01.05 Writing the Equation of a Line

01.06 Comparing Functions

01.06 Comparing Functions

Module 1 Practice Test

Module 1 Test

Module 02: Rational, Complex, and Polynomials

---

02.01 Rational Exponents

02.01 Rational Exponents

02.02 Properties of Rational Exponents

02.02 Properties of Rational Exponents

02.03 Solving Radical Equations

02.03 Solving Radical Equations

02.05 Complex Numbers

02.05 Complex Numbers

02.06 Operations of Complex Numbers

02.06 Operations of Complex Numbers

02.07 Review of Polynomials

02.07 Review of Polynomials

02.08 Polynomial Operations

02.08 Polynomial Operations

Module 2 Practice Test

Module 2 Test

## Module 03: Factoring and Quadratics

---

03.01 Greatest Common Factors and Special Products  
03.01 Greatest Common Factors and Special Products  
03.02 Factoring by Grouping  
03.02 Factoring by Grouping  
03.03 Sum and Difference of Cubes  
03.03 Sum and Difference of Cubes  
03.04 Graphing Quadratics  
03.04 Graphing Quadratics  
03.06 Completing the Square  
03.06 Completing the Square  
03.07 Solving Quadratic Equations  
03.07 Solving Quadratic Equations  
03.08 Solving Quadratic Equations with Complex Solutions  
03.08 Solving Quadratic Equations with Complex Solutions  
03.09 Investigating Quadratics  
03.09 Investigating Quadratics  
Module 3 Practice Test  
Module 3 Test

## Module 04: Dividing and Solving Polynomials

---

04.01 Polynomial Long Division  
04.01 Polynomial Long Division  
04.02 Polynomial Synthetic Division  
04.02 Polynomial Synthetic Division  
04.03 Theorems of Algebra  
04.03 Theorems of Algebra  
04.04 Rational Root Theorem and Descartes' Rule of Signs  
04.04 Rational Root Theorem and Descartes Rule of Signs  
04.05 Solving Polynomial Equations  
04.05 Solving Polynomial Equations  
Mid-Module Check  
04.07 Graphing Polynomial Functions  
04.07 Graphing Polynomial Functions  
04.08 Polynomial Identities and Proofs  
04.08 Polynomial Identities and Proofs  
04.09 Module Four Review and Practice Test  
04.09 Module Four Review and Practice Test  
Module 4 Test

## Module 05: Rational Expressions

---

05.01 Simplifying Rational Expressions  
05.01 Simplifying Rational Expressions  
05.02 Multiplying and Dividing Rational Expressions  
05.02 Multiplying and Dividing Rational Expressions  
05.03 Adding and Subtracting Rational Expressions  
05.03 Adding and Subtracting Rational Expressions  
05.04 Simplifying Complex Fractions  
05.04 Simplifying Complex Fractions  
05.06 Discontinuities of Rational Expressions  
05.06 Discontinuities of Rational Expressions

05.07 Asymptotes of Rational Functions  
05.07 Asymptotes of Rational Functions  
05.08 Solving Rational Equations  
05.08 Solving Rational Equations  
05.09 Applications of Rational Equations  
05.09 Applications of Rational Equations  
Module 5 Practice Test  
Module 5 Test

## Semester Exam

---

Final Exam Practice Test  
Final Exam Algebra II, First Semester

## End of Course Survey

---

End of Course Survey