



Prealgebra Detailed Topics List with Suggested Homework and Assessments

CHAPTER 1 – WHOLE NUMBERS

Section 1.1 – Introduction to Whole Numbers

Topics:

- A. Identify counting numbers and whole numbers
- B. Identify the place value of a digit
- C. Use place value to name whole numbers
- D. Use place value to write whole numbers
- E. Round whole numbers

Suggested Homework Exercises: 1 – 49 odd

Section 1.2 – Add Whole Numbers

Topics:

- A. Use addition notation
- B. Add whole numbers without models
- C. Translate word phrases to math notation
- D. Add whole numbers in applications

Suggested Homework Exercises: 59 – 133 odd

Section 1.3 – Subtract Whole Numbers

Topics:

- A. Use subtraction notation
- B. Subtract whole numbers
- C. Translate word phrases to math notation
- D. Subtract whole numbers in applications

Suggested Homework Exercises: 141 – 219 odd

Section 1.4 – Multiply Whole Numbers

Topics:

- A. Use multiplication notation
- B. Multiply whole numbers
- C. Translate word phrases to math notation
- D. Multiply whole numbers in applications

Suggested Homework Exercises: 225 – 337 odd





Section 1.5 – Divide Whole Numbers

Topics:

- A. Use division notation
- B. Divide whole numbers
- C. Translate word phrases to math notation
- D. Divide whole numbers in applications

Suggested Homework Exercises: 343 – 439 odd

SUGGESTED ASSESSMENT: Chapter 1 Practice Test

*Note: Practice Test Answer Keys are posted on the video library homepage

CHAPTER 2 – THE LANGUAGE OF ALGEBRA

Section 2.1 – Use the Language of Algebra

Topics:

- A. Use variables and algebraic symbols
- B. Identify expressions and equations
- C. Simplify expressions with exponents
- D. Simplify expressions using order of operations

Suggested Homework Exercises: 1 – 63 odd

Section 2.2 – Evaluate, Simplify, and Translate Expressions

Topics:

- A. Evaluate algebraic expressions
- B. Identify terms, coefficients, and like terms
- C. Simplify expressions by combining like terms
- D. Translate word phrases to algebraic expressions

Suggested Homework Exercises: 69 – 141 odd

Section 2.3 – Solving Equations Using the Subtraction and Addition Properties of Equality

Topics:

- A. Determine whether a number is a solution of an equation
- B. Solve equations using the Addition and Subtraction Properties of Equality
- C. Translate word phrases to algebraic equations
- D. Translate to an equation and solve

Suggested Homework Exercises: 147 – 207 odd

Section 2.4 – Find Multiples and Factors

Topics:

- A. Identify multiples of numbers
- B. Use common divisibility tests
- C. Find all of the factors of a number
- D. Identify prime and composite numbers

Suggested Homework Exercises: 215 – 261 odd





Section 2.5 – Prime Factorization and the Least Common Multiple (LCM)

Topics:

- A. Find the prime factorization of a composite number
- B. Find the least common multiple (LCM) of two numbers

Suggested Homework Exercises: 267 – 311 odd

SUGGESTED ASSESSMENT: Chapter 2 Practice Test

*Note: Practice Test Answer Keys are posted on the video library homepage

CHAPTER 3 – INTEGERS

Section 3.1 – Introduction to Integers

Topics:

- A. Locate positive and negative numbers on a number line
- B. Order positive and negative numbers
- C. Find opposites
- D. Simplify expressions with absolute value
- E. Translate word phrases to expressions with integers

Suggested Homework Exercises: 1 – 55 odd

Section 3.2 – Add Integers

Topics:

- A. Model addition of integers
- B. Simplify expressions with integers
- C. Evaluate variable expressions with integers
- D. Translate word phrases to algebraic expressions
- E. Add integers in applications

Suggested Homework Exercises: 63 – 121 odd

Section 3.3 – Subtract Integers

Topics:

- A. Model subtraction of integers
- B. Simplify expressions with integers
- C. Evaluate variable expressions with integers
- D. Translate word phrases to algebraic expressions
- E. Subtract integers in applications

Suggested Homework Exercises: 127 – 205 odd





Section 3.4 – Multiply and Divide Integers

Topics:

- A. Multiply integers
- B. Divide integers
- C. Simplify expressions with integers
- D. Evaluate variable expressions with integers
- E. Translate word phrases to algebraic expressions

Suggested Homework Exercises: 211 – 277 odd

Section 3.5 – Solve Equations Using Integers; The Division Property of Equality

Topics:

- A. Determine whether an integer is a solution of an equation
- B. Solve equations with integers using the Addition and Subtraction Properties of Equality
- C. Solve equations using the Division Property of Equality
- D. Translate to an equation and solve

Suggested Homework Exercises: 285 – 345 odd

SUGGESTED ASSESSMENT: Chapter 3 Practice Test

*Note: Practice Test Answer Keys are posted on the video library homepage

CHAPTER 4 – FRACTIONS

Section 4.1 – Visualize Fractions

Topics:

- A. Understand the meaning of fractions
- B. Convert between improper fractions and mixed numbers
- C. Find equivalent fractions
- D. Locate fractions and mixed numbers on the number line
- E. Order fractions and mixed numbers

Suggested Homework Exercises: 1 – 71 odd

Section 4.2 – Multiply and Divide Fractions

Topics:

- A. Simplify fractions
- B. Multiply fractions
- C. Find reciprocals
- D. Divide fractions

Suggested Homework Exercises: 77 – 167 odd





Section 4.3 – Multiply and Divide Mixed Numbers and Complex Fractions

Topics:

- A. Multiply and divide mixed numbers
- B. Translate phrases to expressions with fractions
- C. Simplify complex fractions
- D. Simplify expressions written with a fraction bar

Suggested Homework Exercises: 177 – 247 odd

Section 4.4 – Add and Subtract Fractions with Common Denominators

Topics:

- A. Add fractions with a common denominator
- B. Subtract fractions with a common denominator
- C. Mixed Practice

Suggested Homework Exercises: 255 – 311 odd

Section 4.5 – Add and Subtract Fractions with Different Denominators (Part 1)

Topics:

- A. Find the least common denominator (LCD)
- B. Convert fractions to equivalent fractions with the LCD
- C. Add and subtract fractions with different denominators

Suggested Homework Exercises: 317 – 369 odd

Section 4.5 – Add and Subtract Fractions with Different Denominators (Part 2)

Topics:

- D. Identify and use fraction operations
- E. Use the order of operations to simplify complex fractions
- F. Evaluate variable expressions with fractions

Suggested Homework Exercises: 371 – 431 odd

Section 4.6 – Add and Subtract Mixed Numbers

Topics:

- A. Add and subtract mixed numbers with a common denominator
- B. Add and subtract mixed numbers with different denominators

Suggested Homework Exercises: 437 – 489 odd





Section 4.7 – Solve Equations with Fractions

Topics:

- A. Determine whether a fraction is a solution of an equation
- B. Solve equations with fractions using the Addition and Subtraction Properties of Equality
- C. Solve equations with fractions using the Division and Multiplication Properties of Equality
- D. Translate sentences to equations and solve

Suggested Homework Exercises: 499 – 569 odd

SUGGESTED ASSESSMENT: Chapter 4 Practice Test

*Note: Practice Test Answer Keys are posted on the video library homepage

