

Summary Chapter 2: Solving Linear Equations

Intermediate Algebra from OpenStax, a free and open online textbook

Section 1:

Terminology

- Linear equation in one variable
- Addition Property of Equality
- Multiplication Property of Equality

Be Able To

- Apply the Addition Property of Equality to solve a linear equation in one variable
- Apply the concepts
- Apply the Multiplication Property of Equality to solve a linear equation in one variable
- Apply both the Addition and Multiplication Property of Equality to solve a linear equation in one variable
- Apply the concepts

Section 2:

Terminology

No additional definitions

Be Able To

- Construct and solve number problems
- Construct and solve geometry problems
- Solve simple interest applications

Be able to use the formula

- Formula for Simple Interest:

If an amount of money, P , called the principal, is invested or borrowed for a period of t years at an annual interest rate r , the amount of interest, I , earned or paid is given by

$$I = Prt$$

Section 3:

Terminology

- Formula

Be Able To

- Solve a formula for a specific variable
- Use formulas to solve geometry applications

Section 4:

Omitted

Section 5:

Terminology

- Linear inequality in one variable
- Addition Property for Inequalities
- Multiplication Property for Inequalities

Be Able To

- Apply the Addition Property for Inequalities to solve a linear inequality in one variable
- Apply the Multiplication Property of Inequalities to solve a linear inequality in one variable
- Apply both the Addition and Multiplication Property of Equality to solve a linear inequality in one variable
- Construct and solve linear inequalities in one variable
- Apply the concepts

Section 6:

Terminology

- Compound Inequality

Be Able To

- Apply the Addition Property for Inequalities to solve a linear compound inequality in one variable
- Apply the Multiplication Property of Inequalities to solve a linear compound inequality in one variable
- Apply both the Addition and Multiplication Property of Equality to solve a linear compound inequality in one variable

- Construct and solve linear compound inequalities in one variable
- Apply the concepts

Sample Applications of Chapter 2 Content

- Use a given expression to calculate target heart rate
- Solve circumference of circle formula for a specified variable
- Solve markup formula for a specified variable
- Solve supplementary angles formula for a specified variable
- Solve complementary angles formula for a specified variable
- Solve sum of angles in a Triangle formula for a specified variable
- Solve profit formula for a specified variable
- Solve discount formula for a specified variable
- Solve Hardy-Weinberg formula for a specified variable. **Example:** $p + q = 1$ where p is the frequency of the dominant allele in a population and q is the frequency of the recessive allele
- Solve distanced formula for a specified variable
- Solve Fahrenheit to Celsius formula for a specified variable
- Solve Celsius to Fahrenheit formula for a specified variable
- Solve Celsius to Kelvin formula for a specified variable
- Solve perimeter of triangle formula for a specified variable
- Solve perimeter of trapezoid formula for a specified variable
- Solve perimeter of square formula for a specified variable
- Solve perimeter of parallelogram formula for a specified variable
- Solve perimeter of rectangle formula for a specified variable
- Solve area of parallelogram formula for a specified variable
- Solve area of triangle formula for a specified variable
- Solve area of trapezoid formula for a specified variable
- Solve area of triangle formula for a specified variable
- Solve volume of rectangular solid formula for a specified variable
- Solve volume of right circular cone formula for a specified variable

- Solve volume of right circular cylinder formula for a specified variable
- Solve simple interest formula for a specified variable
- Solve distanced formula for a specified variable
- Solve Newton's 2nd Law of Motion formula for a specified variable
- Solve continuous compound interest formula for a specified variable

Section 7:

Omitted