Chapter 1 Summary: Linear Equations and Inequalities

Course Textbook by McKeague, Essentials of Elementary and Intermediate Algebra: A Combine Course, XYZ Textbook

Section 1:
Know The Following Definitions
- Variable
- Algebraic Expression
- Terms
- Similar (Like) Terms

Be Able To
- Simplify an algebraic expression
- Evaluate an algebraic expression
- Apply the concepts

Section 2:
Know The Following Definitions
- Linear equation in one variable
- Addition Property of Equality

Section 3:
Know The Following Definitions
- Multiplication Property of Equality

Section 4:
Know The Following Definitions
No additional definitions

Section 5:
Know The Following Definitions
- Formula

Section 6:
Know The Following Definitions
No additional definitions

Section 7:
Know The Following Definitions
- Formula

Section 8:
Know The Following Definitions
- Formula

Section 9:
Know The Following Definitions
- Formula
Section 7:
Know The Following Definitions
No additional definitions

Section 8:
Know The Following Definitions
• Linear inequality in one variable
• Addition Property for Inequalities
• Multiplication Property for Inequalities

Be Able To
• Construct and solve interest problems
• Construct and solve triangle problems
• Construct and solve miscellaneous problems

Section 9:
Know The Following Definitions
• Compound Inequality

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
Sample Applications of Chapter 1 Content

- Use a given formula to calculate Target Heart Rate
- Use a given formula to calculate Phone Rates
- Use a given formula to calculate Temperature and Altitude
- Use a given formula to calculate Basal Metabolic Rate (BMR) for women
- Use a given formula to calculate Basal Metabolic Rate (BMR) for men
- Use a given formula to calculate Deductions
- Use a given formula to calculate Gross Pay
- Use a given formula to calculate Pay from Tutoring Job
- Use a given formula to calculate Car Rental price
- Use a given formula to calculate Minimum Wage
- Use a given formula to Find Pulse Pressure
- Use a given formula to calculate Body Mass Index (BMI)
- Use a given formula to determine Body Mass Index (BMI) range
- 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
- Solve Distanced Traveled 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 Traveled formula for a specified variable

• Solve Newton’s 2\textsuperscript{nd} Law of Force formula for a specified variable

• Solve Continuous Compound Interest formula for a specified variable