Construction Math 1 & 2

TOTAL for Construction Math 1 & 2:

18 to 24 hours to complete.

Construction Math 1:
2 quizzes plus practice exercises
Final test 50 questions
Passing mark on final test = 70

Construction Math 2:
2 quizzes plus practice exercises
Final test 50 questions
Passing mark on final test = 70

COURSE DESCRIPTION

Math is the language of construction. It's important for accuracy, efficiency, and safety to make sure the work is done correctly. The aim of this course is to help the learner develop an understanding of how arithmetic, algebra, geometry, and conversions relate to construction.

To make it easier to succeed in this course, we've split Construction Math into 2 parts, with a test at the end of each.

At the end of Construction Math 1 & 2, you will be able to:

- Use and understand all operations on whole numbers, fractions and decimals commonly used in the construction industry
- Calculate the perimeter, circumference, area, and volume of various shapes and figures including floor and roof areas, concrete footings, slabs, walls, and columns
- Convert measurements from fractions to decimals
- Convert measurements between metric and imperial systems

Construction Math 1 & 2

Objectives

Part 1: Arithmetic and Geometry

Module 1: Introduction

- Apply the basic functions of arithmetic in construction-based word problems
- Describe the basic geometric shapes and figures commonly encountered in construction
- Explain the function of algebra and working with variables

Module 2: Simple Geometry

- Calculate perimeters of squares and rectangles
- Calculate areas of squares and rectangles
- Calculate volumes of cubes and rectangular prisms

Part 2: Complex Geometry and Conversions

Module 3: Complex Geometry

- Calculate perimeters of triangles, parallelograms. rhombuses and circles
- Calculate areas of triangles, parallelograms, rhombuses and circles
- Calculate volumes of triangular prisms and cylinders

Module 4: Conversions

- Execute conversions between roof slope angles, percentages and pitches
- Execute conversions between metric and imperial units
- Execute conversions between imperial and metric units

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COURSE OUTLINE: CONSTRUCTION MATH 1

Module 1: Introduction to Math

Arithmetic

- Functions
- Rounding
- Exercises

Geometry

- Shapes
- Figures
- Exercises

Algebra

- Variables & Formulas
- Pythagoras Theorem
- Exercises

Module 2: Simple Geometry

Length

- Lines and Stations
- Perimeters
- Exercises

Area (Quadrilaterals)

- Floor Plans
- In the Field
- Exercises

Volume (Quadrilaterals)

- Floor Plans
- In the field
- Board Feet
- Exercises

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COURSE OUTLINE: CONSTRUCTION MATH 2

Module 3: Complex Geometry

Triangles

- Perimeter
- Area
- Volume
- Exercises

Circles

- Perimeter
- Area
- Volume
- Exercises

Complex Shapes & Figures

- Simplifying Areas
- Simplifying Volumes
- Exercises

Module 4: Conversions

Metric & Imperial

- Length
- Area
- Volume
- Weight/Mass
- Temperature
- Exercises

Ratios

- Ratios
- Slope
- Percentage
- Exercises

Energy

- Energy Units
- Air Movement
- Energy Intensity
- Exercises