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Basic Math for Mechanics

Basic Curriculum Module



Funding provided by Department of Labor, Employment & Training Administration: WIRED Initiative





Introductions and Administrative Requirements





Instructor Introduction



- Name
- Work experience
 - Job(s)
 - Length of employment
 - Certifications
- Other related experience



Student Introductions

- Name
 - Work experience
 - Job(s)
 - Length of employment
 - Certification(s)
- Other related experience





Course Overview





Course Purpose

- **To teach and verify ability to perform the math operations required to make measurements, layout/locate parts/details/clips when required.**



Course Objectives

Upon completion of this course you will be able to:

1. Perform the math operations using whole numbers, fractions and decimals.



Evaluation

- Assessments include:
 - **Final Written Test** (assesses knowledge)
 - Multiple choice or fill in the blank
 - 90% passing; corrected to 100%
 - Closed book
 - **Shop Projects** (assesses skills) – (when applicable)
 - 100% to spec., or correctable to 100%
- Certification is awarded upon successful completion



Basic Math for Mechanics





Topics

- **Addition, Subtraction, Division & Multiplication of**
 - Whole numbers
 - fractions
 - Common
 - Mixed
 - Decimal
- **Order of operations**



Whole Numbers

- Addition of whole numbers
- Subtraction of whole numbers
- Division of whole numbers
- Multiplication of whole numbers



Common Fractions

- Addition of common fractions
- Subtraction of common fractions
- Division of common fractions
- Multiplication of common fractions



Mixed Fractions

- Addition of mixed fractions
- Subtraction of mixed fractions
- Division of mixed fractions
- Multiplication of mixed fractions



Decimal Numbers

- Addition of decimal numbers
- Subtraction of decimal numbers
- Division of decimal numbers
- Multiplication of decimal numbers



Order of Operations

- Use of parenthesis



Application

- Common Fastener & Drill sizes to Decimal Number and Vs.Versa
- Nominal Edge Distance, Edge Margin and Equal Spacing Calculations
- Dimension, Plus or Minus, Size and Tolerance Calculations.
- Calculator Usage, functions, display, memory storage and power requirements.



Summary, Review & Skill Check

- Exercises, Workbook, Reviews
- Verify course objectives met
- Test Evaluation