

# BA01B: Mathematics for Technicians II

Catalogue Number	77-BA01B-0001
Category	JobMaster

## Introduction to Basic Mathematics II

### Skill 1: Working with Conversion Formulas

- 1.1: Temperature Conversions
- 1.2: Pressure Conversions
- 1.3: Belt Length Calculations
- 1.4: Calibrating Shaft Speed
- 1.5: Measuring V-Belt Drive Speed
- 1.6: Scenarios
- 1.7: Determining Shaft Speed Ratio
- 1.8: Calculating Shaft Speeds
- 1.9: Distance Between Shaft Centers
- 1.10: Calculating Chain Length
- 1.11: Skill Overview
- 1.12: Skill Drill
- 1.13: Concept Review

### Skill 2: Applying Mechanical Principles

- 2.1: Units
- 2.2: Force
- 2.3: Torque
- 2.4: Velocity
- 2.5: Acceleration
- 2.6: Work
- 2.7: Energy
- 2.8: Power
- 2.9: Skill Overview
- 2.10: Skill Drill
- 2.11: Concept Review

### **Skill 3: Calculating Drive Ratios**

- 3.1: Introduction
- 3.2: Pitch Diameter
- 3.3: Speed Ratio
- 3.4: Rotation Direction
- 3.5: Skill Overview
- 3.6: Skill Drill
- 3.7: Concept Review

### **Skill 4: Calculating Speed Reducer Service Factor**

- 4.1: Speed Reducers
- 4.2: Speed Reducer Calculations
- 4.3: Skill Overview
- 4.4: Skill Drill
- 4.5: Concept Review

### **Skill 5: Using Ohm's Law in Series and Parallel Circuits**

- 5.1: Ohm's Law
- 5.2: Series Circuits
- 5.3: Parallel Circuits
- 5.4: Skill Overview
- 5.5: Skill Drill
- 5.6: Concept Review

### **Skill 6: Converting Binary, Binary Coded Decimal (BCD), Hexadecimal and Decimal Numbers**

- 6.1: Decimal System
- 6.2: Binary System
- 6.3: The BCD System
- 6.4: Hexadecimal System
- 6.5: Skill Overview
- 6.6: Skill Drill
- 6.7: Concept Review

## **Skill 7: Calculating Pressure, Force, Head and Flow**

- 7.1: Hydraulic Calculations
- 7.2: Pressure and Force
- 7.3: Head
- 7.4: Flow
- 7.5: Skill Overview
- 7.6: Skill Drill
- 7.7: Concept Review

## **Skill 8: Calculating Shim Requirements**

- 8.1: Shimming
- 8.2: Shims Needed to Correct Misalignment
- 8.3: Skill Overview
- 8.4: Skill Drill
- 8.5: Concept Review

## **Skill 9: Selecting Pipe Size**

- 9.1: Pipe Size for Pneumatic Plumbing
- 9.2: Skill Overview
- 9.3: Skill Drill
- 9.4: Concept Review

## **Comprehensive Post-Test**