



Basic Algebra

Performance Based Objectives

1. Differentiate between math related symbols and terms, and how to apply them to problems and equations.
2. Apply basic order of operations, including the concept of a number line, integers, signed numbers, fractions and mixed numbers
3. Utilize fractions, decimals and percents in applications using increases, decreases, taxes, and commissions.
4. Define and recognize unknowns, variables and apply them to developing equations.
5. Identify polynomials.
6. Solve equations by subtraction, addition, multiplication, division, roots and exponents - including one equation in one variable and two equations in two variables.
7. Recognize and provide solutions to quadratic equations.
8. Convert various units (such as: length, area, volume, speed, flow, time, temperature, density, heat, viscosity, hardness, strength, etc.) within and between measurement systems (US and Metric)
9. Apply conversions to various Industrial problems such as length, volume, area, pressure, flow, time and temperature.
10. Change word problems into algebraic equations and solve.
11. Solve various types of algebraic word problems such as (simple ones) join, separate, compare or multiply/divide; and more complex ones like: distance, age, work, percentage, mixtures, number problems, ratios, proportions, basic statistics and charts.
12. Rearrange and solve complex algebraic formulas.
13. Apply mathematics to technical problems such as complex equations, special formulas, and handbook data.
14. Define and use accuracy of measurements including precision and tolerances.
15. Read industrial instruments such as pressure gauges, rulers, thermometers, etc.
16. Read, Create, and Calculate Graphs, Graphing, Charts, Linear Equations and Tables.





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