

Truckee Meadows Community College  
Department of Mathematics

**Math 120: Basic College Math**  
(3 credit hours)

**Catalog Course Description:** Mathematical concepts particularly relevant to informed and aware citizenship in modern society. Topics covered include functions, graphs, problem solving, topics in finance, geometry, probability and statistics. Satisfies UNR core curriculum.

**Pre-requisites:** C or better in MATH 096 or equivalent or qualifying ACCUPLACER, ACT/SAT test results. A TI-83 or TI-84 graphics calculator is required for this course.

**Course Outcomes:** Upon successful completion of the course, students will be able to:

1. Distinguish between deductive and inductive reasoning processes.
2. Determine the validity of an argument given a set of premises or statements.
3. Analyze a deductive argument by implementing the logical process of constructing a Venn diagram.
4. Describe and represent sets and combinations of sets.
5. Compute and use the cardinal number of a set by using Venn diagram.
6. Apply the rules of combinatorics and combinations of set to compute the cardinal number of a set.
7. Identify a probability experiment and construct or describe its sample space.
8. Identify events and compliments of events and compute theoretical and empirical probabilities by using the definitions and rules of probability and combinatorics.
9. Compute the expectation of a random variable.
10. Construct, interpret a frequency distribution, histogram, Pie chart for a set of data.
11. Compute the mean, median, mode, variance and standard deviation for a set of raw or grouped data.
12. Use the Normal Distribution to perform computations in probability and to solve applied problems including but not limited to confidence intervals and margins of error.
13. Find and interpret a linear regression equation for a set of data.
14. Compute present and future values by using formulas appropriate to simple and compound interest as appropriate.
15. Apply financial formulas to solve applied problems and make critical choices in situations involving add-on interest loans, simple interest amortized loans and annuities.
16. Perform geometric computations involving perimeter, area, surface area and volume and apply these concepts to application situations.
17. Find exact and approximate values for trigonometric ratios for angles measured in degrees.
18. Apply trigonometry to problems involving solving and applying right triangles.
19. Use exponential and logarithmic functions in mathematical modeling.
20. Solve and apply exponential equations.
21. Use a graphics calculator to perform calculations, construct and represent mathematical models and form conjectures.

**Students with Disabilities Statement:** Qualified students with documented disabilities have the right to free accommodations to ensure equal access to educational opportunities at Truckee Meadows Community College. For assistance and clarification of services provided under the ADA, contact the Disability Resource Center, Red Mountain Building Rm. 315, (673-7286).

**Student Conduct Policy:** Truckee Meadows Community College encourages all students to pursue academic studies and other college sponsored activities that promote intellectual growth and personal development. Students are responsible for complying with Nevada System of Higher Education (NSHE) and college guidelines. TMCC has an obligation to maintain conditions under which the work of the college can go forward freely, in accordance with the highest standards of quality, institutional integrity and freedom of expression. These standards, procedures for reporting infractions, and processes for addressing complaints and allegations are available on the TMCC web site, college catalog (appendix L) and the office of the associate dean of students (RDMT 120, 673-7114)