

TOPICS TO STUDY FOR MATHCON

- ❖ The following topics provide a framework for MathCON.
- ❖ These topics are not curriculum.
- ❖ It is recommended that students review previous grade topics.
- ❖ Any grade level's topics are related to the previous grade level and promote continuous improvement over the years.
- ❖ A MathCON test consists of multiple-choice questions covering the following topics:
Algebra, Geometry, Number Theory, and Combinatorics
- ❖ There could be questions from different topics that aren't listed below at MathCON.

TOPICS TO STUDY FOR MATHCON

8TH GRADE MATH

- ❖ Irrational numbers
- ❖ Square root and cubic root
- ❖ Scientific notation
- ❖ Operations with exponents
- ❖ Ratios and proportional relationships and their graphs
- ❖ Absolute Value Equations, Inequalities and their graphs
- ❖ Slope and graphs of linear equations
- ❖ Linear equations with one variable solution, infinitely many solutions, or no solutions.
- ❖ Solving systems of two linear equations in two variables
- ❖ Define, evaluate, compare and the graph of functions
- ❖ Rate of change and initial value of the function
- ❖ Increasing, decreasing, linear or nonlinear function
- ❖ Dilations, rotations, reflections, and translations
- ❖ Similar and congruent figures
- ❖ Pythagorean Theorem
- ❖ The distance between two points in a coordinate system
- ❖ Volumes of cones, cylinders, and spheres
- ❖ Similar solids
- ❖ Scatter plots for bivariate measurement data
- ❖ Clustering, outliers, positive, negative, linear, and nonlinear association
- ❖ Permutation, Combination and Probability