

Why Study Math?

Answer the Perennial Question in a Unique Way!

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What is Mathematics? Why Study It?

Mathematics is not simply a set of rules, skills, and procedures. Rather, mathematics is characterized by the type of questions explored.

Mathematics explores "life's questions" from a logical and quantitative point of view.

People, in every field of endeavor, need mathematical skills and abilities to help them deal with questions similar to the following:

A Non-Exhaustive List of Life's Key Questions: (randomly ordered)

- How can this information be sorted, organized, grouped, compared, and visualized?
- What is the result of this series of actions? Are the steps reversible?
- Does it follow? Can you verify that fact? How can we be sure?
- Have we reached a maximum or minimum? Can things get better or worse? What's best?
- What are the possibilities? Have we missed something?
- What strategies are available? Is there a different way to look at the situation?
- What are the chances? What are the risks?
- Can we simulate or model the situation?
- A small part of the situation is visible, but what is "actually" there?
- Why does this work?
- Are these figures accurate? Do the books balance?
- What's missing? What's extra?
- Is that result reasonable? Do I have enough resources to solve the problem?
- Are these two things related? Does one factor influence the other?
- What are the extremes? What is most likely? How much variation can we expect?
- What are the ground rules? What limits and opportunities do they impose?
- Does this situation behave like any other situation? What's the same? What's different?
- How much space is needed? Can we create a scale model?
- How fast is the situation changing? How much time will it take?
- Will the proposed change really make a difference? How can we tell? What is our test?
- Is there a shortcut or a procedure (algorithm) to perform this task?
- What have we learned from our experiences? How can we improve the outcome?
- How precise must our work be?
- What does this table (or graph) say? How can we present this information?
- Is there a pattern here? What's next? Will this trend continue?
- How much is necessary to complete this task?
- etc.