Mathematics in Schools

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Outline

What is Math?

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Mathematics is the science of **pattern, structure, order, and relation** that has evolved from elemental practices of counting, measuring, and describing the shapes of objects.

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It deals with

- logical reasoning,
- quantitative calculation, and
- has involved an increasing degree of idealization and abstraction.

Scope

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Example 1

$$2 + 2 = 4$$

Why Math?

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- **Math is fun**

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$$
\begin{aligned}
1 \times 8 + 1 &= 9 \\
12 \times 8 + 2 &= 98 \\
123 \times 8 + 3 &= 987 \\
1234 \times 8 + 4 &= 9876 \\
12345 \times 8 + 5 &= 98765 \\
123456 \times 8 + 6 &= 987654 \\
1234567 \times 8 + 7 &= 9876543 \\
12345678 \times 8 + 8 &= 98765432 \\
123456789 \times 8 + 9 &= 987654321
\end{aligned}
$$

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  - If you like solving puzzles and figuring things out, then a mathematics major may interest you.
  - Applications of Mathematics are everywhere and a strong background in Mathematics can help you in many different careers.

- **Critical Thinking / Thinking Dynamism ...**

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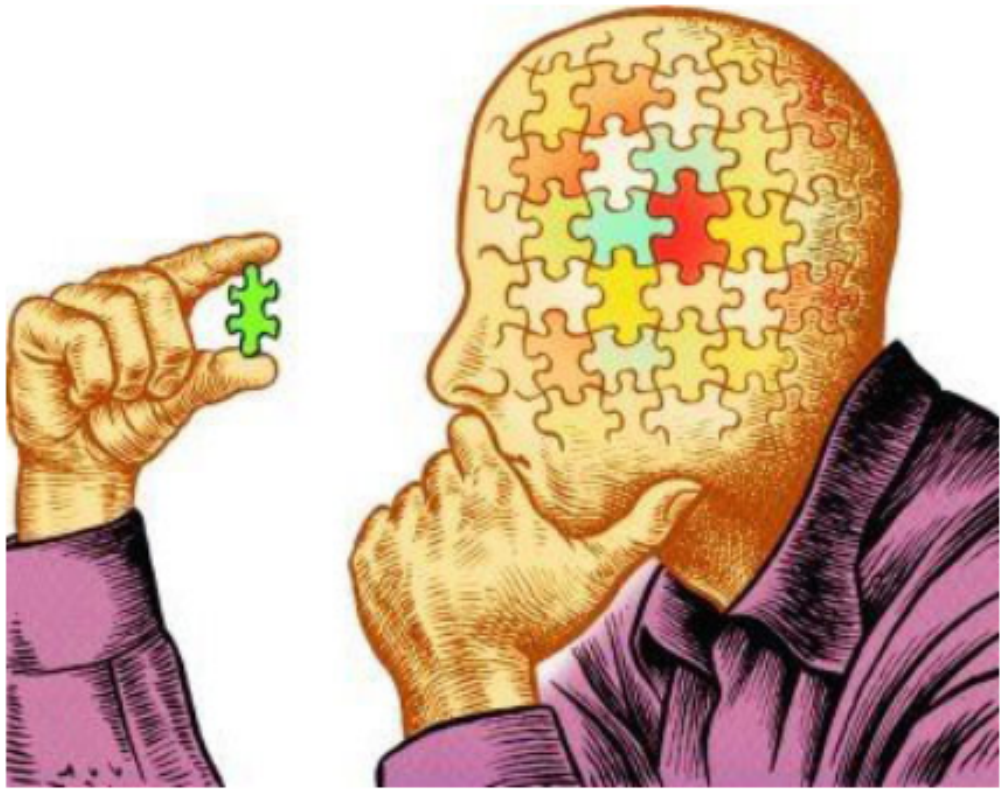

Young people need to be able to think critically to connect ideas and sources across disciplines.

Assessment of critical thinking skills:

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When it is with math, it would be a calculated thinking.

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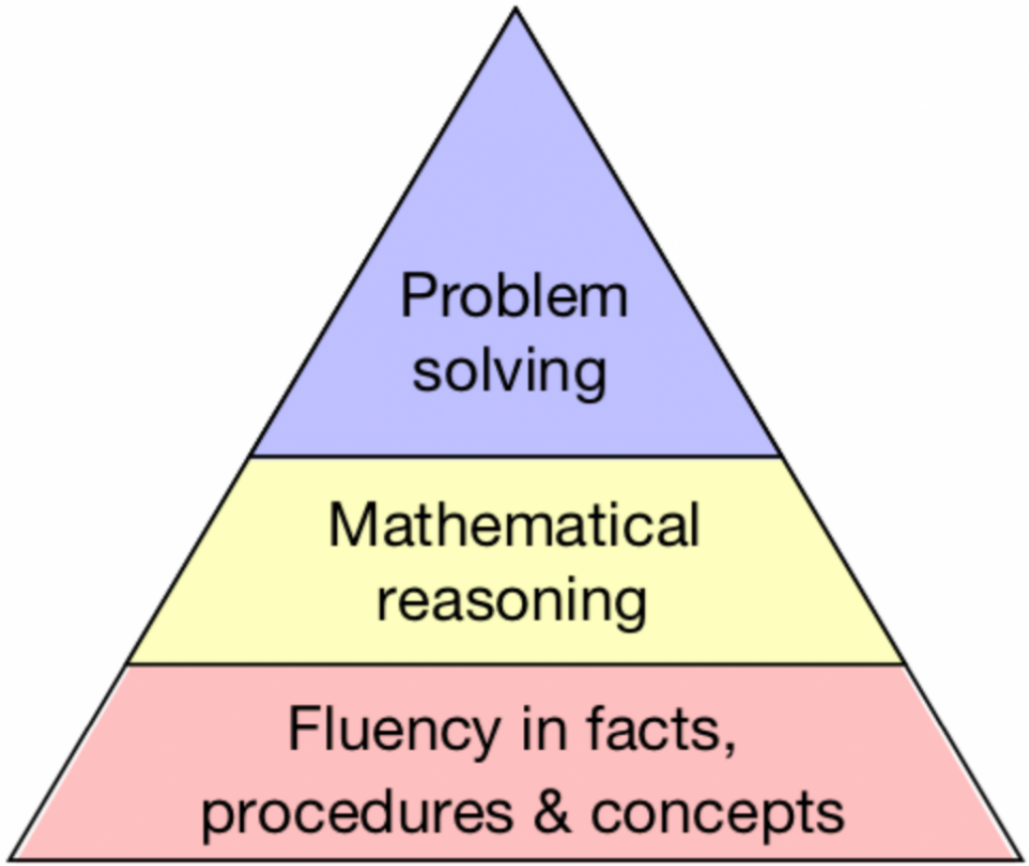
  - identifying the problem,
  - analyzing possible solutions, and
  - deciding on the best course of action.


Problem solving
Mathematical reasoning
Fluency in facts, procedures & concepts

- **Logical Reasoning ...**

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  - Interaction

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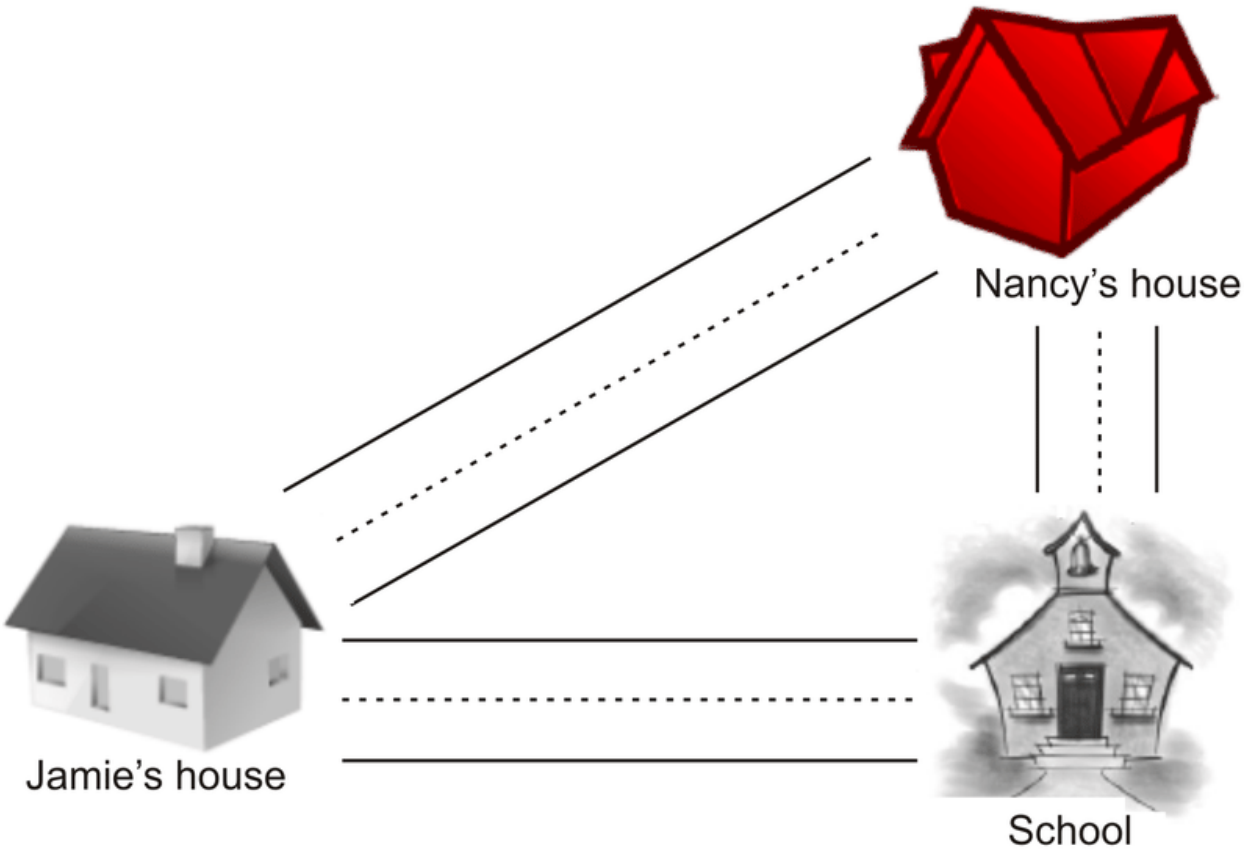
    The more logical you are the more acceptable you will be.
  - Power to reason
  - Creativity and communication



$$c^2 = a^2 + b^2$$

Transferable Skills

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So math is not just about numbers but about acquiring skills that can be applied in various areas.

Where is Math?

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Math is all around us and helps us understand the world better.

In reality, math is everywhere!

In nature

In nature

Bees, masters of geometry, use hexagons to build their honeycombs.

Fibonacci Numbers

The sequence of the famous Fibonacci Numbers is

$$\{1, 1, 2, 3, 5, 8, 13, 21, 34, \ldots\}$$

Marigold

Sunflower

In Science

- **Data analysis:** to make accurate predictions and understanding complex systems.

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- **Modelling:** Simulate real-world phenomena.
- **Quantitative reasoning:** to design experiments, interpret results and draw conclusions.

In Technology

- **Coding:** Programming languages essential for software development.

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- **Engineering:** Math is used to design from bridges to airplanes.
- **Data Science:** Analyze and interpret large datasets, helping organizations and businesses make better decision.

In Business

From financial analysis to marketing research.

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- **Statistics**
- **Accounting**
- **Investing**

To live in a mathematically-driven world and not know math is like walking through an art museum with your eyes closed.

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To learn math is to open up a world of opportunity!!!

Contact address

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THANK YOU!!!