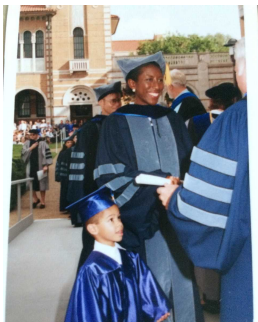


# Grade of "B" or Higher in Mathematics: 3-Step Process

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## Founder & CEO: Mobile Math, LLC

- Mathematics and Statistics Professor for 17 years
- Rice University, Ph. D. Statistics
- Graduated #1 in Class
- Undergraduate Degrees: Mathematics and Statistics



## Who Was Professor George Pólya?

- George Pólya (1887 – 1985)
- Professor of Mathematics, Zurich and Stanford University
- Made notable contributions to theoretical mathematics
- Well known for mathematics education

## Pólya's Problem Solving Techniques

- 1945 Book *How To Solve It*
- Identified 4 basic principles of problem solving

## Pólya's 4 Basic Principles of Problem Solving

- 1<sup>st</sup> Understand the problem
- 2<sup>nd</sup> Devise a plan
- 3<sup>rd</sup> Carry out the plan
- 4<sup>th</sup> Look back

## 1<sup>st</sup> Understand the problem

- Do you understand all of the definitions used in a problem?
- What are you asked to find?
- Can you think of a diagram that might help you understand the problem?
- Do you understand the problem?

## 2<sup>nd</sup> Devise a plan

- Choose a strategy
- Use a formula
- Make an orderly list
- Be ingenious

## 3<sup>rd</sup> Carry out the plan

- Persist with the plan you have chosen
- Check each step
- Prove that each step works
- If the plan continues not to work, discard and choose another



## 4<sup>th</sup> Look back

- Examine the solution
- Check the result
- Derive the solution differently
- Use the method for another problem

## 3 – Step Process: Grade of "B" or Higher

**Step 1:** Preview for each class by reading book, notes, etc.

**Step 2:** Come to class on time, ask questions, take good notes

**Step 3:** Review and study on a regular basis

## Study Guide and Pólya's Principles

- Definitions: 1<sup>st</sup> *Principle: Understand the Problem*
- Formulas: 2<sup>nd</sup> *Devise a plan*
- How To...: 3<sup>rd</sup> *Carry Out the Plan*
- Examples: 4<sup>th</sup> *Look back*

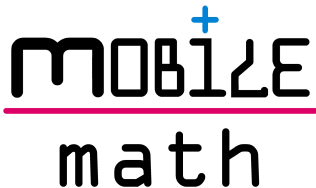
## Study Guide Supplies

- 3-ring binder divided into 4 sections
- 4-legal pads
- 4-notebooks
- 4-sets of index cards

## Construct a Study Guide

- Definitions
- Formulas
- How To...
- Examples

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