

# Suggestions for Reading Mathematics

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## **1 First: understand the story.**

Even if you don't understand all the words, you can understand a lot by skimming the expository paragraphs. Is this portion of the text about a specific example? a general phenomenon? Does the author say it is related to something you know about? Does the section contain a lot of detailed proofs, or mainly a discussion? What words are defined in the section?

## **2 Second: understand the broad ideas.**

Read the definitions. Create small examples and non-examples. Read the theorems. Create small examples and non-examples to illustrate the theorem. Skip all the proofs. Summarize the text in your own words.

## **3 Third: understand the details.**

Read the proofs. Create larger examples and non-examples. Create generalizations of the definitions and theorems. Try to prove your generalizations.

## **4 Continually repeat this cycle.**

Read the section again, skipping all proofs. Create a short summary of the text in your own words. Create a short outline of the text.