

# LEARNING MATH

*from the  
Effective Study Series*

*provided by*  
GCSU Counseling Services

(478) 445-5331  
210 Wellness and Recreation Center  
[www.gcsu.edu/studentlife/counseling](http://www.gcsu.edu/studentlife/counseling)

### **Read the problem carefully.**

- What is the given?
- What is the unknown?
- What conditions are imposed on the problem?
- Be sure that you understand all the terms and concepts used in the statement or the problem.
- Read the problem several times to check for understanding of each step and concept.

### **Search for a solution.**

- Compare your problem to examples found in the textbook or presented in class.
- Can you find a connection between the given data and the unknown? Can the explicitly given data be used with mathematical equations or properties to yield other useful data?
- Use the “guess-try-examine” model. Take a guess at the solution; try your guess; examine the results of your guess for special insights about your problem. If your guess is incorrect, then using newly discovered insights, take another guess and repeat the cycle.
- Have you tried to use all of the data? Conditions?
- Be on the look out for patterns. If patterns occur, relentlessly explore them. They often lead to a position.

- If you cannot solve the problem, look for an appropriate related problem. Try to solve a simpler version of the problem. Attempt to solve a specific cause of the problem. What condition or data could be added to solve the problem?
- Are there any aspects or features about the problem which appear vaguely familiar to you? Use your textbook to bring into focus that which is vague and fuzzy. Remember the pursuit of one vague idea will lead to many new and useful ideas.
- Carry out the solution. Check each step for correctness and clarity.
- Examine the solution attained. Is the answer reasonable? Does it make sense?
- If possible, check your solution by taking a different approach.



If these tips don't work for you, consider tutoring from the Learning Center, 2-56 Arts & Sciences. (478) 445-1179

Text from “How to Solve a Math Problem,” and “Mathematics: Guidelines to Learning,” from the Counseling & Testing Center, University of Georgia.