

Name: _____ Date: _____ Period: _____

☆ **Steps to Successful Problem Solving (Polya's 4 Step Method)** ☆

* When faced with any problem, especially those within this course, it can be highly beneficial to keep the following steps in mind. Practice this process when working on class work, exit slips, and homework assignments, and you can be set up for success when it comes to quizzes, tests, and state assessments.

☞ **STEP 1: UNDERSTAND THE PROBLEM.**

- Underline important information
- Look up any vocabulary words you are unfamiliar with.
- Circle what you are asked to find.

☞ **STEP 2: ORGANIZE THE INFORMATION.**

- There are many ways to organize information within a problem including but not limited to:
 - ~ drawing & labeling a picture
 - ~ creating a table
 - ~ setting up an equation
 - ~ designing a chart

☞ **STEP 3: CHOOSE A STRATEGY.**

- There are many strategies for solving problems including but not limited to:
 - ~ looking for relationships within a picture
 - ~ setting up equations based on relationships
 - ~ solving an equation
 - ~ looking for and extending a pattern

☞ **STEP 4: SOLVE AND CHECK! ☺**

- When checking your work, remember to ask yourself the following questions:
 - ✓ Are my calculations correct?
 - ✓ Is my answer reasonable? Does it make sense?
 - ✓ Did I clearly communicate my thought process and reasoning?
 - ✓ Did I justify my solution and prove that it must be correct?
 - ✓ Is my work clear, complete, and organized?
 - ✓ Did I include the correct units?

* When faced with a problem involving a picture, it may be helpful to remember the '**LRE Method**':

- ~ **LABEL** the picture appropriately.
- ~ Look for **RELATIONSHIPS**.
- ~ Set up & Solve **EQUATIONS** based on the relationships.

* Sometimes, you may have to draw the picture based on the given information first.