**Problem Solving- Math Inquiry**

**UNDERSTANDING THE PROBLEM**

\* Can you state the problem in your own words?

\* What are you trying to find or do?

\* What are the unknowns?

\* What information do you obtain from the problem?

\* What information, if any, is missing or not needed?

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| **DEVISING A PLAN**\* Look for a pattern.\* Examine related problems, and determine if the same technique can be applied.\* Examine a simpler or special case of the problem to gain insight into the solution of the original problem.\* Make a table.\* Make a diagram.\* Write an equation.\* Use guess and check.\* Work backward.\* Identify a subgoal**Solve! (on separate piece of paper)**\* Implement the strategy or strategies in step 2, and perform any necessary actions or computations.\* Check each step of the plan as you proceed. This may be intuitive checking or a formal proof of each step.\* Keep an accurate record of your work.**Review**\* Check the results in the original problem. (In some cases this will require a proof.)\* Interpret the solution in terms of the original problem. Does your answer make sense? Is it reasonable?\* Determine whether there is another method of finding the solution.\* If possible, determine other related or more general problems for which the techniques will work. |