**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. | |