**Problem of the Month Required Procedure**

I do not expect anyone to get a complete solution. The purpose of a problem is to strengthen your problem-solving skills and habits. Difficult problems in the real world take long periods of time and many contributors to solve. Do not get discouraged or give up if you are not making good progress, just take a break. You will be GRADED on the process. You can receive full credit by showing six hours of work at home (alone or with others) following the guidelines. You can get a poor grade if you do not follow the guidelines even if you submit a “correct” answer.

1. Calendar six hours (over the month) to work on the problem before you start.

Time “thinking” without recording what you think is wasted and does NOT count.

2. Date your work as you go. Head each entry with the date (Record time you start

and stop.) Keep your work in chronological order. Use plenty of paper.

3. Work only when rested and not pressured for time. Do not throw away false starts.

Do explain how you found the start was “false.”

The work during the month will be scheduled as follows.

**Week 1**

*Day 1* – In Class: read the problem aloud with others. Write about general thoughts and various ways you might generate and record data.

At Home: spend 15 minutes recording ideas about ways you could begin your work.

*Day 2 or 3* – In Class: Re-read the problem at your table. Make sure you understand the problem. Generate and record only a few pieces of data.

At Home: Start small Generate and record a few pieces of data. Explain your thinking process. Always record places you made mistakes.

*Day 4 or 5* – In Class: Talk to others about their ways to generate and record data and double check (with them) the data you each collected and the methods used.

At Home: Re-visit how you will allocate the rest of your six hours working on the problem. Begin to look for patterns in the data that you are SURE are correct.

**Week 2**

*Day 1 or 2* – At Home: Record more data. Explain your thinking process.

*Day 3* – Check your data with others. Give credit in your write-up for specific ideas and data.

*Day 4 or 5* – At Home: Carefully record a substantial amount of data using your patterns.

**Week 3**

*Day 1 or 2* – At Home: Finish the parts of the problem you have worked on or come to a contradiction and find your mistake(s).

*Day 4 or 5* – At Home: 1st Draft– A reflection on your journey: your growth as an efficient problem solver and things you will try on the next PoM.

**Week 4**

*Day 1, 2 or 3* – At Home: Do a careful re-write of your paper.

*Day 4* – At Home: Re-read your paper. Correct spelling, grammar, and flow.

Turn in (on time) ALL your work, not just your final write-up.