Before the students start on an assigned PoM, we review the:

PoM Required Procedure

Lay out a plan to spend 6 hours during the month on the steps below.

Always date the work as you go.

Keep your work in chronological order.

Step 1. Read the problem aloud with others. Jot down a few general thoughts.

Step 2. Re-read the problem. Decide how you might record data (table, spreadsheet, …)

That is it for Day 1 in class (10 minutes). Step 3 is done at home.

Step 3. Generate and record just a few pieces of data. Jot down places you “almost made mistakes.”

Next day in class – (5-10 minutes)

Step 4. Talk to others about better ways to generate and record data. Check the data you generated.

Step 5. (Done at home.) Re-read the problem. Carefully generate a little more data.

Take a break for a few days

Step 6. Carefully generate a substantial amount of data at home. In class, check your group data.

Combine your data with others’ data that has been carefully checked. (Give credit)

Take another long break

Step 7. Carefully recheck your data.

Step 8. Make a conjecture or two. Support it or come to a contradiction to refute the conjecture.

Take another few days of break

Step 9. Write a draft of your findings, frustrations, and lessons learned. Have others comment.

Step 10.Final paper – A reflection on your journey, how it helped you grow as a problem solver and things you will try on the next PoM. Turn it in (on time).

Remember:

I do not expect anyone to get a complete solution.

Allocate time over the month before you start. Do substantial planning first.

My purpose 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.

Work when rested and not pressured for time.