SCENARIO: Your allowance was $10 a week each month (a total of $40 most months), if you do all your chores every day. (Call this plan A) Every month, however, you miss at least a day a week of chores and you never end up getting anything, which doesn’t seem fair to you. This past month, for example, you missed the 3rd, 4th, 11th, 22nd, and 27th days of the month, and you didn’t receive any allowance. You suggest to your mom that instead why not make it a dollar a day (for a total of $30, even less than she was willing to pay before) each day that chores are complete. (Call this plan B) You are thinking that this way, you will still at least get something even if you miss days. Your mom insists that what she is interested in is consistency, and says instead that she will only pay a penny for a single day, but that for each day that you do chores in a row, the payment is doubled. (Call this plan C) She is thinking that this way, you will have to do at least 8 days in a row to make a dollar, which is still better than she is getting out of you now.

TASK: Choose a method to answer each of the following questions: You can use a calculator, a graphing calculator, or an Excel spreadsheet, or can do work by hand. You should be prepared to explain your answers and why your chose the method you did to the class next time. Answers to all questions should be written out and handed in at the end of this class.

1. How much money would you have made this past month by each plan?
2. How much money you would make if you did your chores every day for a month under each plan?
3. How many days in a row would you have to do chores with plan C to make it worthwhile to switch to plan C?
4. What pattern do you notice for each plan? Can you find a function that represents the amount of money earned compared to the number of days for each plan?

5) Which plan is the best… for you? For your mom?