(2) The random sequence doesn't have a clear discernible pattern, other than the values remaining in between 0 and 1.

(3) In order to create a repeated sequence, the values for the constants a and M need to be made small compared to the seed value. Keeping the seed value constrained to the date/time, I made a and M orders of magnitude smaller than the seed value and was able to create a sequence which oscillated between 0 and 0.5.

(4) Graphically, I don't see any clear pattern walking through the values in the sequence.

(5) Looking at multiple sequences, they all end up being the same. This is because in the for loop, the seed value for each sequence is the same.

(6) To fix the sequences so that they aren't all the same, I randomized the seed value and then the sequences were no longer correlated.

(7) Looking at the scatter plot between the Numpy random function and the power residue function, we see that the power residue random function has a linear correlation between x and y and the Numpy random function has no correlation between x and y. The power residue function is linearly correlated because they have the same seed values and the same default constants. If we wanted to fix this, without changing the constants, we could alter the seed value by having a time delay between when the x points are generated and when the y points are generated.