

Problem Set 0

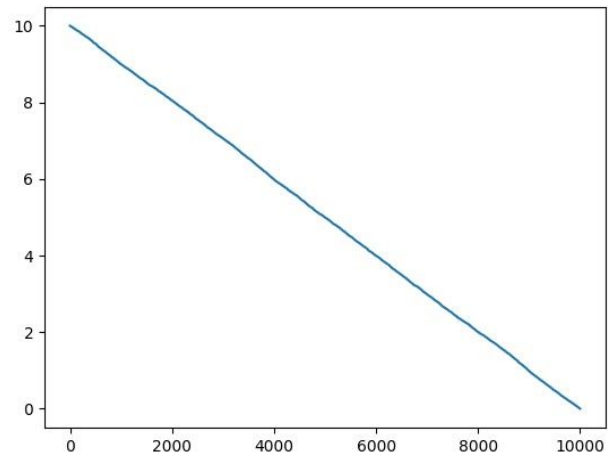
Problem 1

- a. Set `x` to an ndarray of integers 0-999 shuffled randomly.
- b. Set `'a'` to a 2D array of ints. Then set `'b'` equal to the 3rd subarray in the ndarray `'a'`. `'a'` and `'b'` still reference the same data.
- c. Set `a` to a 2D array of ints. Then set `'b'` equal to a 1D array of the elements in `'a'` in the given order. `'a'` and `'b'` still reference the same data.
- d. Set `x` to a 5x1 ndarray of random floats from a Gaussian distribution with mean 0 and stdev 1. Then set `y` to a rank 1 array of all the floats from `x` that are greater than 0.
- e. Set `x` to an ndarray of 10 elements all set to 0.5. Then set `y` to the same thing (but not a reference to the same data). Then set `z` to a 10 element ndarray of all 1s by doing an elemental addition of each element in `x` and `y`.
- f. Set `'a'` to an array of integers 1-99. Then set `'b'` to a reversed list of the elements in `'a'`.

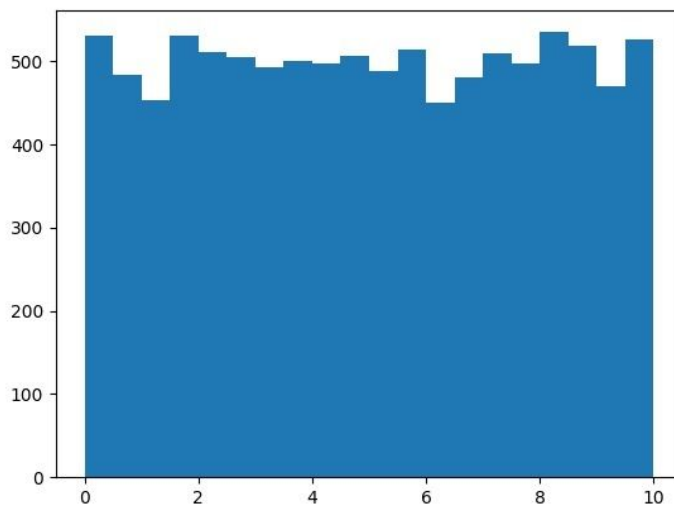
Problem 2

- a. `def random_dice(N):`
 `return np.ceil(np.random.rand(N) * 6)`
- b. `def reshape_vector(y):`
 `return y.reshape((3,2))`
- c. `def max_value(z):`
 `maxValue = np.max(z, keepdims=True)`
 `x, y = np.where(z == maxValue)`
 `return x[0], y[0]`
- d. `def count_ones(v):`
 `return len(v[v == 1])`

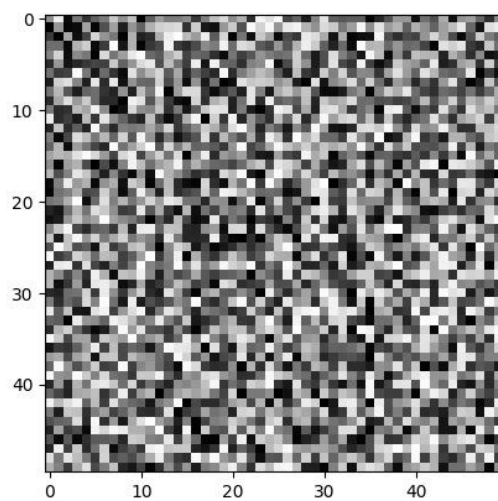
Problem 3



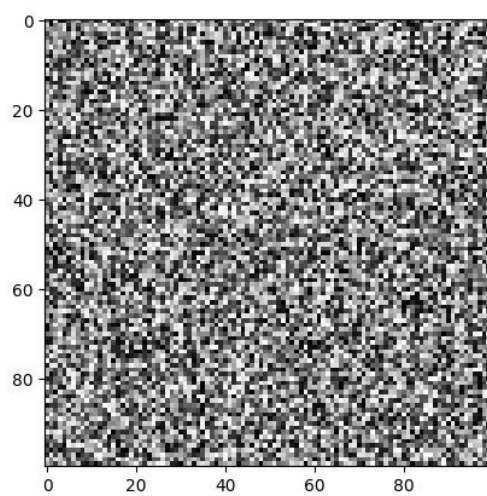
a.



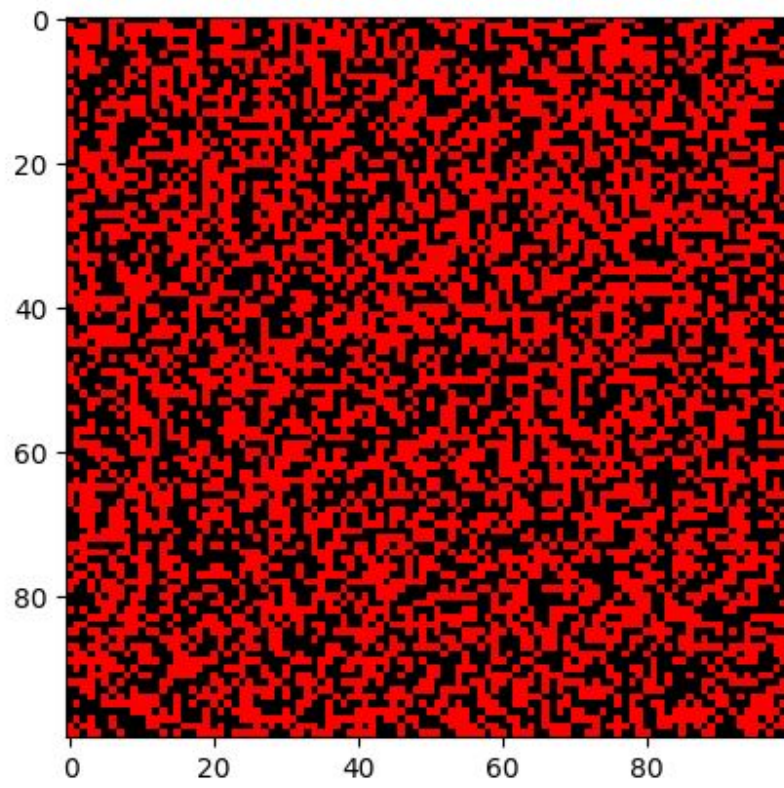
b.



c.



d.



e.

Problem 4

