

1. If you have any, what are your choices for increasing the comparison between different figures on the same graph?

Ans: Subplots in matplotlib can be used to increase the comparison between different figures on the same graph.

2. Can you explain the benefit of compound interest over a higher rate of interest that does not compound after reading this chapter?

Ans: Compound interest makes a sum of money grow at a faster rate than simple interest, because in addition to earning returns on the money you invest, you also earn returns on those returns at the end of every compounding period, which could be daily, monthly, quarterly or annually.

3. What is a histogram, exactly? Name a numpy method for creating such a graph.

Ans: Histogram shows total values of X wrt Y.
numpy.histogram() is the built-in function used.

4. If necessary, how do you change the aspect ratios between the X and Y axes?

Ans: figure() function inside the matplotlib.pyplot can be used to scale down or up the graph.

5. Compare and contrast the three types of array multiplication between two numpy arrays: dot product, outer product, and regular multiplication of two numpy arrays.

Ans: regular multiplication multiplies values of the same index, dot product performs row wise multiplication and outer multiplication multiplies every element of the first array with every element of another array (order $m1*n2$).

6. Before you buy a home, which numpy function will you use to measure your monthly mortgage payment?

Ans: np.pmt(rate, nper, pv) function we will be using in order to calculate monthly mortgage payment before you purchase a house.

rate = The periodic interest rate

nper = The number of payment periods

pv = The total value of the mortgage loan

7. Can string data be stored in numpy arrays? If so, list at least one restriction that applies to this data.

Ans: Yes, an array can store the string. The restriction imposed on the string data is, whenever we store the data of string dtype limit is the string with maximum length.