

PRACTICAL 11: WORKING WITH NUMPY, SCIPY AND MATPLOTLIB

1) A housekeeper is supposed to keep 8 plants in entrance of house to make it decorative . he initially arranges all 8 plants in single row keeping to make it look like a fencing to garden area of house. The next day, the owner of the house seems isn't happy enough by the arrangement made by the housekeeper and asks him to place it equally on both sides of entrance. All the plants are of different sizes and types. After few days, proper care to plants is giving by providing adequate amount of water and two different nutritions to it. Due to much sunlight 2 plants are destroyed and the owner decides to replace it with 2 new plants of a specific existing type only. Also owner thinks to take away 2 different plants to other side of house .Finally owner thinks to rearrange alike plants together and keep them on one side and rest all on other Kindly help the housekeeper to make possible arrangements .

Note: plants are given name w.r.t numbers.

2) University conducts examination (practical + theory) for students. The following frequency distribution tables shows the marks obtained by 100 students:

Theory Marks	0-20	20-40	40-60	60-80	80-100
No. of students	6	x	46	y	8

Practical Marks	0-20	20-40	40-60	60-80	80-100
No. of students	10	28	X	y	32

As shown above, while making entry the exam controller is unable to understand few entries made by examiner, kindly help controller to identify no. of students. Also , plot a histogram corresponding to practical examination result.

3) A student has scored E1= [20,18,30,22,15] marks (out Of 40) and E2-[19, 22,33,30,19] during 2 mid semester exams . A teacher is supposed to graphically show the difference of marks and compare performances of student. Help the teacher to do graphical representation.