Assignment-1

Problem Statement:

The following are the problems to be solved using pandas and numpy:-

1.Numpy:-

a.How to find common values between two arrays?
b.Consider two random array A and B, check if they are equal
c.How to compute ((A+B)*(-A/2)) in place (without copy)?
d.Consider a random 10x2 matrix representing cartesian coordinates, convert them to polar coordinates.

2.Pandas:-

a.How do you count how many unique rows a DataFrame has (i.e. ignore all rows that are duplicates)?

b.Given a DataFrame of random numeric values:

df = pd.DataFrame(np.random.random(size=(5, 3))) # this is a 5x3 DataFrame of float values
how do you subtract the row mean from each element in the row?

c.A DataFrame has a column of groups 'grps' and and column of integer values 'vals':

```
df = pd.DataFrame({'grps': list('aaabbcaabcccbbc'),
      'vals': [12,345,3,1,45,14,4,52,54,23,235,21,57,3,87]})
```

For each group, find the sum of the three greatest values. You should end up with the answer as follows:

```
grps
a    409
b    156
c    345
```

Take time to think on the problems and use any resources needed.
Important: Please prepare a google doc where you write a brief explanation to your solution. This will be very helpful for you as well as ease our process of evaluation.