```
# Question 1)
# create a numpy array starting from 2 till 50 with a stepsize of 3
arr=numpy.arange(2,50,3)
print(arr)
```

```
    [ 2  5  8 11 14 17 20 23 26 29 32 35 38 41 44 47]
```

```
# Question 2)
#  accept two list of 5 elements each from the user.
# convert them to numpy arrays.concatenate these arrays and print it also sort these array
import numpy as np
lst1=input("enter 5 elements:")
lst2=input("enter 5 elements:")
arr1=np.array(lst1)
arr2=np.array(lst2)
arrays_sort=[lst1+lst2]
print("the arrary after sorting")
print(arrays_sort)
```

```
    enter 5 elements:1,2,3,4,5
    enter 5 elements:6,7,8,9,10
    the arrary after sorting
    ['1,2,3,4,56,7,8,9,10']
```

```
# Question 3)
# write a code snippet to find the dimenssion of a nd array and its size.
import numpy
arr=np.array([2,7,8,9,4])
print(arr)
print(arr.ndim)
print(type(arr))
```

```
    [2 7 8 9 4]
    1
    <class 'numpy.ndarray'>
```

```
# Question 4)
# How to convert a 1D array into a 2D array?Demonstrate with the help of a code snippet
import numpy as np
arr=np.array([2,4,6,8])
print("1d array is:")
print(arr)
print("after conversion of 1d to 2d array is:")
arr_2d=np.reshape(arr, (-1,2))
print("2d array is:")
print(arr_2d)
```

```
    1d array is:
    [2 4 6 8]
    after conversion of 1d to 2d array is:
    2d array is:
```

```
    [[2 4]
     [6 8]]
```

```python
# Question 5)
# Consider two square numpy arrays.stack them vertically and horizentally.
import numpy as np

a= np.array([[4,6],[7,8]])
b= np.array([[1,2],[3,4]])
print ("stacking vertically:",np.vstack((a,b)))
print("stacking horizontaly:",np.hstack((a,b)))
```

```
    stacking vertically: [[4 6]
     [7 8]
     [1 2]
     [3 4]]
    stacking horizontaly: [[4 6 1 2]
     [7 8 3 4]]
```

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# Question 6)
# how to get unique items and counts of unique items?
a_list = [1,1,4,5,9,9,2,6,4]
a_set = set(a_list)
number_of_unique_values=len(a_set)
print("total no of unique item is:")
print(number_of_unique_values)
```

```
    total no of unique item is:
    6
```