Numpy Exercise Questions

1.Write a NumPy program to generate five random numbers from the normal distribution

**2.** Write a NumPy program to generate six random integers between 10 and 30.

**3.** Write a NumPy program to create a 3x3x3 array with random values.

**4.**Write a NumPy program to create a 5x5 array with random values and find the minimum and maximum values.

**5.** Write a NumPy program to create a random 10x4 array and extract the first five rows of the array and store them into a variable.

6.Write a NumPy program to normalize a 3x3 random matrix   
**7.**Write a NumPy program to create a random vector of size 10 and sort it.    
**8.**Write a NumPy program to find the nearest value from a given value in an array.

9. Let x be a ndarray [10, 10, 3] with all elements set to one. Reshape x so that the size of the second dimension equals 150.

10. Let x be an arbitrary 3-D array of shape (3, 4, 5). Permute the dimensions of x such that the new shape will be (4,3,5).

 11. Let x be an arbitrary 2-D array of shape (3, 4). Permute the dimensions of x such that the new shape will be (4,3).

12. Let x be an arbitrary 2-D array of shape (3, 4). Insert a nex axis such that the new shape will be (3, 1, 4).

13. Lex x be an array   
[[ 1 2 3]  
[ 4 5 6].  
  
and y be an array   
[[ 7 8 9]  
[10 11 12]].  
Concatenate x and y so that a new array looks like   
[[1, 2, 3, 7, 8, 9],   
[4, 5, 6, 10, 11, 12]].

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