Dictionaries

**Are lists and dictionaries the same? Justify your answer using answers to the following inquiry and the graphic organizer.**

1. wellBalancedDinnerList = [‘apple’, ‘broccoli’, ‘chicken’, ‘quinoa’, ’water’, ‘chocolate’ ]

Write a statement to print ‘chicken’ (statement should involve variable name of list). **print (wellBalancedDinnerList[2])**

-------‐------‐‐-‐‐‐‐ Remember, lists are **sequences**​ in Python-----------‐‐‐‐‐‐‐---

1. wellBalancedDinnerDictionary = {‘fruit’: ‘apple’, ‘veggie’: ‘broccoli’, ‘protein’:’chicken’, ‘carb’:quinoa’, ‘drink’ : ‘water’, ‘dessert’ : ‘chocolate’}

‐‐‐‐‐‐‐‐‐‐‐ wellBalanceDinnerDictionary is a **dictionary**​ in Python ‐‐‐‐‐‐‐‐‐‐‐

What does print(wellBalancedDinnerDictionary[‘protein’]) print? **chicken**

‐‐‐‐‐‐‐‐‐‐‐‐‐‐‐‐‐‐‐‐Dictionaries use a **key**​ to reference a value​‐‐‐‐‐‐‐‐‐‐‐‐‐‐‐‐‐‐‐‐‐

1. Write a line of code to print ‘chocolate’ (use the wellBalanceDinnerDictionary)

**print (wellBalancedDinnerDictionary[‘dessert’]**

1. Type these commands in the Shell: aDictionary = { 2.34: ‘2’ , 4.56 : ‘4’ , 3.67 : ‘3’, 2.15 : ‘2’} aDictionary[2.15]

bDictionary = { 2: ‘two’, 3: ‘three’, 4: ‘four’}

bDictionary[4]

What is printed? What can you infer about dictionary keys based on the keys in question 2 and these two examples?

**‘2’ and ‘four’ dictionaries assign the values to the keys that can be called from the dictionary.**

1. Type these commands in the shell: favorites = {'fruit':'apples', 'animal':'cats', 'number':42} for i in favorites: print(i, end = ‘ ‘)

What is printed? Compare the output closely to the favorites dictionary that was defined. What do you notice?

**‘friut’ ‘animal’ ‘number’. The i value is the key, not the value of the keys.**

1. Type these commands in the shell: favorites = {'fruit':'apples', 'animal':'cats', 'number':42} for i in favorites: print(favorites[i], end = ‘ ‘)

What’s printed? Compare the output closely to favorite dictionary. What do you notice? **‘appes’ ‘cats’ 42. It prints the values. It’s calling value of the key (i) of favorites.**

1. Compare the following two screen prints from IDLE

>>> favorites1 = {'fruit':'apples', 'number':42, 'animal':'cats'}

>>> favorites2 = {'animal':'cats', 'number':42, 'fruit':'apples'}

>>> favorites1 == favorites2

True

>>>

>>> listFavs1 = ['apples', 'cats', 42]

>>> listFavs2 = ['cats', 42, 'apples']

>>> listFavs1 == listFavs2

False

>>>

Based on the answers for 5, 6, and the IDLE screen prints here, what is a difference between lists and dictionaries?

**There is no order or indexing for dictionaries, but there is for lists.**

8) Are dictionaries mutable or immutable? Explain how you came to your answer. **Mutable. I used the shell to test if it can be changed.**

**>>> favs = {'color':'red', 'food':'pizza'}**

**>>> favs['color'] = 'black'**

**>>> print (favs)**

**{'color': 'black', 'food': 'pizza'}**

**>>>**