CSE 160 Section 6 Problems

1. Create a function `get_squares` that accepts a list of numbers as a parameter, and returns a dictionary mapping each number in the list to its square.

   For Example:
   ```
   nums = [1, 4, 4]
   ```
   `get_squares(nums)` returns `{1:1, 4:16}`

2. Write a function `coldest_city` that takes in a list of dictionaries like `data` below and return the city with the lowest temperature. For example, `coldest_city(data)` would return “Seattle”.

   `data` is an example data set that can be passed in as a parameter.
   ```
   data = [{city: Seattle, lowest_temp: 36, highest_temp: 45},
          {city: Cupertino , lowest_temp: 39, highest_temp: 63},
          {city: New York, lowest_temp: 57, highest_temp: 66},
          ]
   ```

3. Write a function `get_num_types` that takes a dictionary `pokemon_types` mapping pokemon to their type and returns a new dictionary mapping pokemon type to the number of pokemon in `pokemon_type` with that type.

   For example:
   ```
   pokemon_types = {"pikachu": "electric", "charmander": "fire",
   "charizard": "fire"}

   get_num_types(pokemon_types)
   ```
   returns `{'electric' : 1, 'fire': 2}`

4. What's the output for the following code?

   ```
   fruits = ["watermelons", "oranges", "kiwis", "grapes"]
   print(sorted(fruits, key = len))
   print(sorted(fruits))
   prices = [("watermelons", 23), ("oranges", 12), ("kiwis", 30),
             ("grapes", 25)]
   market = {}
   i = 1
   for tuple in prices:
        market['market_' + str(i)] = tuple
        i += 1
   print(market)
   ```