Iterators, Generators, Comprehensions, zip, all, any

1. Have a look at following tutorials:
    a. https://www.programiz.com/python-programming/iterator
    b. hthttps://www.programiz.com/python-programming/generator
    c. https://realpython.com/introduction-to-python-generators/
    d. https://realpython.com/python-for-loop/
    e. https://towardsdatascience.com/python-basics-list-comprehensions-631278f22c40
    f. https://treyhunner.com/2015/12/python-list-comprehensions-now-in-color/
    g. https://treyhunner.com/2019/03/abusing-and-overusing-list-comprehensions-in-python/
    h. https://www.programiz.com/python-programming/methods/built-in/zip
    i. https://www.programiz.com/python-programming/methods/built-in/any
    j. https://www.programiz.com/python-programming/methods/built-in/all

2. Write a Python generator function (you should use ***yield***). It should take an input integer ***n*** and generate all numbers (from 1 to n) squares and square roots (together), which are multiple 3 and 4.
3. Solve previous problem with generator expression (you should make something like list comprehension, but with ***"()"***).
4. Take two lists and and write a Python program that returns a list that contains only the elements that are common between the lists (without duplicates). Make sure your program works on two lists of different sizes. You should do it with list comprehension.
5. Create a dictionary that has keys numbers and values number squares. Numbers should be from 1 to 13. You should create a dict in different ways:
    a. Ordinary creation with for loop
    b. With ***dict*** constructor
    c. With dictionary comprehension
    d. With using ***zip*** function
6. Write a Python function that accepts a tuple of integers and returns 2 booleans. The first will be ***True*** if all items in tuple are odd. The second will be ***True*** if any of items in tuple is prime. You should use ***all*** and ***any***. For example: ***myfunc((1, 2, 3, 7)) -> False, True***.

You should send me the file with examples, file should be named: "name_surname_hw_8.py".