Practice Questions (Solutions on 2nd Page)

1. Write a function called get_numbers that takes a long string of phone numbers as a parameter, and prints returns each phone number on a separate line in the following format format: nnn-nnn-nnnn. If the number is not composed of all digits... or if it is not the correct length (that is appropriate multiple), then return an empty string.

   Example Output:

   ```
   >print(get_numbers("20388592751947365025"))
   203-885-9275
   194-736-5025
   >print(get_numbers("203"))
   (empty string!)
   ```

2. Write a function named create_arrow that takes a parameter height and creates an arrow pattern with hashtags by forming a vertical line and a diagonal line adjacent to it. You can assume the height is greater than 0.

   Example Output:

   ```
   >create_output(5)
   ##
   # #
   #  #
   #   #
   #    #
   ```

3. You're a campaign manager looking for a new candidate to run for the House or the Senate - however, your chosen candidate must be eligible! To make your life easier, you want to write a program that takes a person's birth year and year of naturalization (the year they became a citizen) as input, and returns whether they are eligible for the House, the House and the Senate, or Neither.

   To be a US senator, you must be at least 30 years old and a US citizen for 9 years. To be a US Representative, you must be at least 25 years old and a US citizen for 7 years.

   Example Output:

   ```
   >eligible(1989, 1995)
   House
   >eligible(1983, 1995)
   House and Senate
   >eligible(1995, 2014)
   Neither
   ```

4. What is the output of this program? When the while loop exits, what is the value of sum?

   ```
   count = 3
   sum = 0
   while(count > 0):
       print ('*' * count) + '\n'
       count -= 1
       sum += count
   ```

```python
# Question 1
# =====

def get_numbers(numbers):
    if len(numbers) % 10 != 0 or not numbers.isdigit():
        return ''

    formatted_numbers = ''
    for i in range(0, len(numbers), 10):
        area_code = numbers[ i : i+3 ]
        prefix = numbers[ i+3 : i+6 ]
        line_number = numbers[ i+6 : i+10 ]
        formatted_numbers += '{}-{}-{}\n'.format(area_code, prefix, line_number)
 return formatted_numbers


# Question 2
# =====

def create_output(height):
    s = ''
    for i in range(height):
        s += '#' + ' ' * i + '#\n'
  return s.strip() # to remove last newline



# Question 3
# =====

birth_year = int(input("What year were you born?"))
citizen_year = int(input("What year were you naturalized?"))
# The code below could also be placed into a function, maybe eligible(birth_year,citizen_year)
age = 2018 - birth_year
years_as_citizen = 2018 - citizen_year
if years_as_citizen >= 9 and age >= 30:
    return "House and Senate"
elif years_as_citizen >= 7 and age >= 25:
    return "House"
else:
    return "Neither"



# Question 4
# =====

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*
```