SECTION 6: METHODS AND FUNCTIONS, 2 hours 54 mins, 30 parts

- **25/29 Function Exercise Solutions - Challenge Problem**
    - -> more challenge problem examples

    - **-> one example**
        - -> function which takes a list of integers and returns True if it contains 0, 0, and 7 in the array
        - -> she's defined an array inside the function - iterating through that [0,0,7] list is popping the numbers off that list if they appear in the input string
        - -> and the case that all the numbers have been popped off -> then the input array involves 0,0,7 -> in which case we define a return True statement
        - -> the argument of the pop function is the index of the element which is popped of in the list
        - -> so she's iterating through the list and then if the element in the list matches the one in the list with 0,0,7 in it and then it pops off the elements in that list -> until there are none left (if there are none left)
        - -> use logic to find the consecutive numbers

    - **-> another example**
        - write a function which returns the number of prime numbers up to and including the argument of the function
        - def count_primes(num):
            - if num < 2:
                - return 0 < this is the check for the 0 or 1 input
                    - -> **the thought process is to think about each of the possible inputs to the function**
                    - **-> and then structure the code according to the case scenarios**
                    - -> in other words, if the input < 2 then there are no primes counting up to the number

                    - **-> then she's creating another block of code**
                        - an array to store the prime numbers and populate it with
                        - then a counter going up to the input number

                        - **she's made a counter going up to the input number**
                            - -> then checked if there is a prime number using modulo
                            - -> if then added it to the primes list (array)
                            - -> if the number itself is prime, then she's added a block of code before that which breaks the iteration

    - **-> the Euler project has problems similar to this**
    - -> functions which print out results rather than return them