1.How many seconds are in an hour? Use the interactive interpreter as a calculator and multiply the number of seconds in a minute (60) by the number of minutes in an hour (also 60).

sol. 60

**hour = 60 \* 60**

2. Assign the result from the previous task (seconds in an hour) to a variable called seconds\_per\_hour.

**seconds\_per\_hour = hour**

3. How many seconds do you think there are in a day? Make use of the variables seconds per hour and minutes per hour.

**hour \* 24**

4. Calculate seconds per day again, but this time save the result in a variable called seconds\_per\_day

**seconds\_per\_day = hour \* 24**

5. Divide seconds\_per\_day by seconds\_per\_hour. Use floating-point (/) division.

**seconds\_per\_day / seconds\_per\_hour**

6. Divide seconds\_per\_day by seconds\_per\_hour, using integer (//) division. Did this number agree with the floating-point value from the previous question, aside from the final .0?

**seconds\_per\_day // seconds\_per\_hour**

7. Write a generator, genPrimes, that returns the sequence of prime numbers on successive calls to its next() method: 2, 3, 5, 7, 11, ...

*def* genPrimes():

    '''

    generate primes, that returns the sequence of prime numbers on successive calls to its next() method: 2, 3, 5, 7, 11, ...

    '''

    primes = []

    n = 2

    while True:

        # remove all multiples in primes

        if all(n % p > 0 for p in primes):

            primes.append(n)

            yield n

        # advance to next digit

        n = n + 1

if \_\_name\_\_ == '\_\_main\_\_':

    primes = genPrimes()

    print(\*primes)