Assignment-15

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

Solution: 60\*60

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

Solution: seconds\_per\_hour = 3600

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

Solution: seconds\_per\_hour \* 24

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

Solution: seconds\_per\_day = seconds\_per\_hour \* 24

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

Solution: 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?

Solution: YES, 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, ...

Solution: def genPrimes():

primes = [2]

yield primes[0]

guess = 3

while True:

if all(guess%x != 0 for x in primes):

primes.append(guess)

if guess == primes[-1]:

yield primes[-1]

guess += 2