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\*60 =3600

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

- seconds\_per\_hour = 60\*60

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

- hours\_per\_day = 24

minutes\_per\_hour = 60

second\_per\_day = seconds\_per\_hour \* hours\_per\_day = 86400

or

second\_per\_day = 60\*minutes\_per\_hour \* hours\_per\_day= 86400

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

- second\_per\_day = seconds\_per\_hour \* hours\_per\_day

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

- seconds\_per\_day / seconds\_per\_hour = 24.0

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?

- yes

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

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def genPrimes():

n = 2

primes = set()

while True:

for p in primes:

if n % p == 0:

break

else:

primes.add(n)

yield n

n += 1