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

ANS: 60**\***60

Out[1]:

3600

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

ANS: seconds\_per\_hour **=** 60 **\*** 60

seconds\_per\_hour

Out[3]:

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.

ANS: one\_day **=** 24

second\_in\_a\_day **=** 24 **\*** seconds\_per\_hour

second\_in\_a\_day

Out[6]:

86400

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

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

seconds\_per\_day

Out[8]:

86400

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

ANS: seconds\_per\_day**/**seconds\_per\_hour

Out[9]:

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?

ANS: Yes

In [10]:

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

Out[10]:

24

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

ANS: **def** genPrimes():

n **=** 2

primes **=** []

**while** **True**:

**for** p **in** primes:

**if** n **%** p **==** 0:

**break**

**else**:

primes**.**append(n)

**yield** n

n **+=** 1