**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\*60

3600

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

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.**

Seconds-per-hour\*24

86400

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

Seconds-per-day= Seconds-per-hour\*24

Seconds-per-day

86400

**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?**

Seconds-per-day// Seconds-per-hour

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, ...**

|  |
| --- |
| None |
|  | 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 |
|  |  |
|  | # Correct |