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).

Ans:

```
In [15]: 1 print(60*60)
3600
```

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

Ans:

```
In [17]: 1 Seconds_per_hour = 60*60
         2 Seconds_per_hour
Out[17]: 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:

```
In [20]: 1 minutes_per_hour = 60
         2 print(Seconds_per_hour*24)
86400
```

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

Ans:

```
In [21]: 1 minutes_per_hour = 60
         2 seconds_per_day = Seconds_per_hour*24
         3 print(seconds_per_day)
86400
```

5. Divide seconds_per_day by seconds_per_hour. Use floating-point (/) division.

Ans:

```
In [25]: 1 print(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?

Ans:

```
In [25]: 1 print(seconds_per_day/seconds_per_hour)
24.0

In [26]: 1 print(seconds_per_day//seconds_per_hour)
24
```

Yes, the values agree.

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:

In [42]:

```
def genPrimes():
    n = 0
    while True:
        if n == 2 or n == 3 :
            yield n
        elif ((n-1)%6 == 0 or (n+1)%6 == 0) and n !=1:
            yield n
        n = n+1

output = genPrimes()
for ele in range(10):
    print(next(output))
```

```
2
3
5
7
11
13
17
19
23
25
```