

# 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).

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

```
3600
```

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

```
In [2]: seconds_per_hour = 60*60
print(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`.

```
In [3]: minutes_per_hour = 60
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`

```
In [4]: seconds_per_day = 24*60*60
print(seconds_per_day)
```

```
86400
```

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

```
In [5]: 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`?

```
In [8]: print(seconds_per_day//seconds_per_hour, end='')
print(' -> yes this values agree with the floating point value from the previous question')
```

```
24 -> yes this values agree with the floating point value from the previous question
```

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

```
In [9]: 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(5):
            print(next(output))
```

```
2
3
5
7
11
```