

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).

Answer :

```
In [1]: 1 60*60
```

```
Out[1]: 3600
```

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

Answer :

```
In [2]: 1 seconds_per_hour=60*60
```

```
In [3]: 1 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`.

Answer :

```
In [4]: 1 seconds_per_hour*24
```

```
Out[4]: 86400
```

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

Answer :

```
In [5]: 1 seconds_per_day = seconds_per_hour * 24
```

```
In [6]: 1 seconds_per_day
```

```
Out[6]: 86400
```

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

Answer :

```
In [7]: 1 seconds_per_day / seconds_per_hour
```

```
Out[7]: 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`?

Answer :

```
In [8]: 1 seconds_per_day // seconds_per_hour
```

```
Out[8]: 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, ...

Answer :

```
In [9]: 1 def genPrimes():
        2     prime=[]
        3     num=1
        4     while (1):
        5         num+=1
        6         for i in prime:
        7             if num%i==0:
        8                 break
        9         else:
       10             prime.append(num)
       11             yield num
```

```
In [10]: 1 genPrime=iter(genPrimes())
```

```
In [11]: 1 next(genPrime)
```

```
Out[11]: 2
```