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).

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  
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