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: There are 3600 seconds in an hour.**

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

**Answer: seconds\_per\_hour = 3600**

1. **How many seconds do you think there are in a day? Make use of the variables seconds per hour and minutes per hour.**

**Answer: There are 86400 seconds in a day (60 minutes/hour \* 24 hours/day \* 60 seconds/minute = 86400 seconds/day).**

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

**Answer: seconds\_per\_day = 86400**

1. **Divide seconds\_per\_day by seconds\_per\_hour. Use floating-point (/) division.**

**Answer: seconds\_per\_day / seconds\_per\_hour = 24.0**

1. **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: seconds\_per\_day // seconds\_per\_hour = 24. The result agrees with the floating-point value, except that the integer division does not include the decimal point.**

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

**Answer: python**

**def genPrimes():**

**primes = []**

**num = 2**

**while True:**

**if all(num % i != 0 for i in range(2, int(num \*\* 0.5) + 1)):**

**primes.append(num)**

**yield num**

**num += 1**