

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). sol. 60

```
seconds_in_minute = 60
```

```
minutes_in_hour = 60
```

```
seconds_in_hour = seconds_in_minute * minutes_in_hour
```

```
print(seconds_in_hour)
```

3600

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

```
seconds_in_minute = 60
```

```
minutes_in_hour = 60
```

```
seconds_per_hour = seconds_in_minute * minutes_in_hour
```

```
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.

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

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

```
seconds_per_day = 86400
```

```
seconds_per_hour = 3600
```

```
result = seconds_per_day / seconds_per_hour
```

```
print(result)
```

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?

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

```
def genPrimes():
```

```
    primes = [] # List to store prime numbers
```

```
    num = 2 # Start checking from 2
```

```

while True:
    # Check if num is prime
    is_prime = True
    for prime in primes:
        if num % prime == 0:
            is_prime = False
            break

    if is_prime:
        primes.append(num)
        yield num

    num += 1

prime_generator = genPrimes()

print(next(prime_generator)) # Output: 2
print(next(prime_generator)) # Output: 3
print(next(prime_generator)) # Output: 5
print(next(prime_generator)) # Output: 7
print(next(prime_generator)) # Output: 11
# And so on...

2
3
5
7
11

```