In [1]:
```
# Q1 In an hour there are 60 minutes and in a minute there are 60 seconds. Numb
```

In [2]:
```
# Q2 seconds_per_hour = 60 * 60
# This will assign the value 3600 to the variable seconds_per_hour.
```

In [3]:
```
# Q3
seconds_per_hour = 60 * 60
seconds_per_day = seconds_per_hour * 24
seconds_per_day
```

Out[3]:
```
86400
```

In [4]:
```
# Q4

# Calculate the number of seconds in an hour
seconds_per_hour = 60 * 60

# Calculate the number of seconds in a day
seconds_per_day = seconds_per_hour * 24

# Print the result
print("Seconds per day:", seconds_per_day)
```

```
Seconds per day: 86400
```

In [5]:
```
# Q5
# Calculate the number of seconds in an hour
seconds_per_hour = 60 * 60

# Calculate the number of seconds in a day
seconds_per_day = seconds_per_hour * 24

# Divide seconds_per_day by seconds_per_hour using floating-point division
result = seconds_per_day / seconds_per_hour

# Print the result
print("Number of hours in a day:", result)
```

```
Number of hours in a day: 24.0
```

In [6]:
```
# Q6
# Calculate the number of seconds in an hour
seconds_per_hour = 60 * 60

# Calculate the number of seconds in a day
seconds_per_day = seconds_per_hour * 24

# Divide seconds_per_day by seconds_per_hour using integer division
result = seconds_per_day // seconds_per_hour

# Print the result
print("Number of hours in a day:", result)
```

```
Number of hours in a day: 24
```

In [7]:
```
# Q7
def genPrimes():
    """A generator that yields prime numbers."""
    primes = []   # a list of prime numbers found so far
    num = 2       # the number to test for primality

    while True:
        # Check if the current number is prime
        for prime in primes:
            if num % prime == 0:
                break
        else:
            # If the number is prime, yield it and add it to the list of primes
            primes.append(num)
            yield num

        # Increment the number to test for primality
        num += 1
primes = genPrimes()

for i in range(10):
    print(next(primes))
```

```
2
3
5
7
11
13
17
19
23
29
```

In [ ]:
```

```