

```
In [1]: groceries = ['pears', 'apples', 'soup', 'chips']
```

```
In [2]: groceries[2]
```

```
Out[2]: 'soup'
```

```
In [3]: groceries[2.0]
```

```
-----  
-----  
TypeError                                Traceback (most recent call l  
ast)  
Cell In[3], line 1  
----> 1 groceries[2.0]  
  
TypeError: list indices must be integers or slices, not float
```

```
In [4]: groceries[1:]
```

```
Out[4]: ['apples', 'soup', 'chips']
```

```
In [5]: for i in range(10):  
        print(i)
```

```
0  
1  
2  
3  
4  
5  
6  
7  
8  
9
```

```
In [6]: for i in range(10.0):  
        print(i)
```

```
-----  
-----  
TypeError                                Traceback (most recent call l  
ast)  
Cell In[6], line 1  
----> 1 for i in range(10.0):  
      2     print(i)  
  
TypeError: 'float' object cannot be interpreted as an integer
```

```
In [7]: 0.1 + 0.2 == 0.3
```

Out[7]: False

In [8]: `0.1 + 0.2`

Out[8]: 0.30000000000000004

In [9]: `45 == '45'`

Out[9]: False

Modulus

In [10]: `10 % 2`

Out[10]: 0

In [11]: `5 % 2`

Out[11]: 1

In [12]: `12 % 5`

Out[12]: 2

In [13]: `12 % 6`

Out[13]: 0

In [14]: `3 % 2`

Out[14]: 1

In [15]: `10 % 2`

Out[15]: 0

In [16]: `9 % 2`

Out[16]: 1

In [17]: `8 % 2`

Out[17]: 0

In [18]: `7 % 2`

Out[18]: 1

```
In [19]: 6 % 2
```

```
Out[19]: 0
```

```
In [20]: 5 % 2
```

```
Out[20]: 1
```

```
In [24]: nums = [1, 2, 3, 4, 5, 6, 7, 8, 9, 10]

for num in nums:
    if num % 2 == 0:
        print(num)
```

```
2
4
6
8
10
```

```
In [25]: for i in range(1000):
          if i % 2 == 0:
              print(i)
```

```
0
2
4
6
8
10
12
14
16
18
20
22
24
26
28
30
32
34
36
38
40
42
44
46
48
50
52
54
```

GUESS.PY

No Headings

The table of contents shows headings in notebooks and supported files.

\$ Terminal 1

4_4_2025.ipynb

guess.py

\$ Terminal 2

```
1 secret_number = 3
2
3 guess = int(input("Please guess a number: "))
4 print(f'The secret number is {secret_number} and the type is
   {type(secret_number)}')
5 print(f'The guessed number is {guess} and the type is {type(guess)}')
6
7
8
9 if guess == secret_number:
10     print("Correct!")
11 else:
12     print("Wrong!")
13
14
```

TABLE OF CONTENTS



No Headings

The table of contents shows headings in notebooks and supported files.

\$_ Terminal 1

 4_4_2025.ipynb

guess.py



\$_ Terminal 2



```

dkilburg@ramen ~ % python3 guess.py
Please guess a number: 8
Wrong!
dkilburg@ramen ~ %
dkilburg@ramen ~ %
dkilburg@ramen ~ % python3 guess.py
Please guess a number: 3
Wrong!
dkilburg@ramen ~ % python3 guess.py
Please guess a number: 3
The secret number is 3
The guessed number is 3
Wrong!
dkilburg@ramen ~ % python3 guess.py
Please guess a number: 3
The secret number is 3 and the type is <class 'int'>
The guessed number is 3 and the type is <class 'str'>
Wrong!
dkilburg@ramen ~ % python3 guess.py
Please guess a number: 3
The secret number is 3 and the type is <class 'int'>
The guessed number is 3 and the type is <class 'int'>
Correct!
dkilburg@ramen ~ % python3 █

```