

# Numbers, Variables, And More



# Write Your Review



Click on a star to change your rating 1 - 5, where 5 = great! and 1 = really bad

**Your Review:**

Your Reivew

999 Characters remaining

## Your Info:

**Name:**

Name

**Email:**

Email

☐ I Agree to the Terms blah blah blah

Submit

# Basic Data Types

Strings

Integers

Booleans

Floats

# Data Types

Strings

Integers

Frozenset

Booleans

Floats

Bytes

Dictionary

Complex

Range

List

Tuple

Set

# Integers

- Whole numbers only
- Positive or Negative
- No Decimal Points!

# Integers

- Whole numbers only
- Positive or Negative
- No Decimal Points!

9

# Integers

- Whole numbers only
- Positive or Negative
- No Decimal Points!

9

378

# Integers

- Whole numbers only
- Positive or Negative
- No Decimal Points!

9

378

-21



# Integers

- Whole numbers only
- Positive or Negative
- No Decimal Points!

9

378

-21

# Floats

- Written With a Decimal Point
- Positive or Negative

# Integers

- Whole numbers only
- Positive or Negative
- No Decimal Points!

9

378

-21

# Floats

- Written With a Decimal Point
- Positive or Negative

1.5

# Integers

- Whole numbers only
- Positive or Negative
- No Decimal Points!

9

378

-21

# Floats

- Written With a Decimal Point
- Positive or Negative

1.5

9.99

# Integers

- Whole numbers only
- Positive or Negative
- No Decimal Points!

9

378

-21

# Floats

- Written With a Decimal Point
- Positive or Negative

1.5

9.99

-2.0

# INT

1234987234321

+8

0

378

1\_000\_000\_000

-99

-8363247238498

1782

# FLOAT

1.33333333

0.5

+8.1

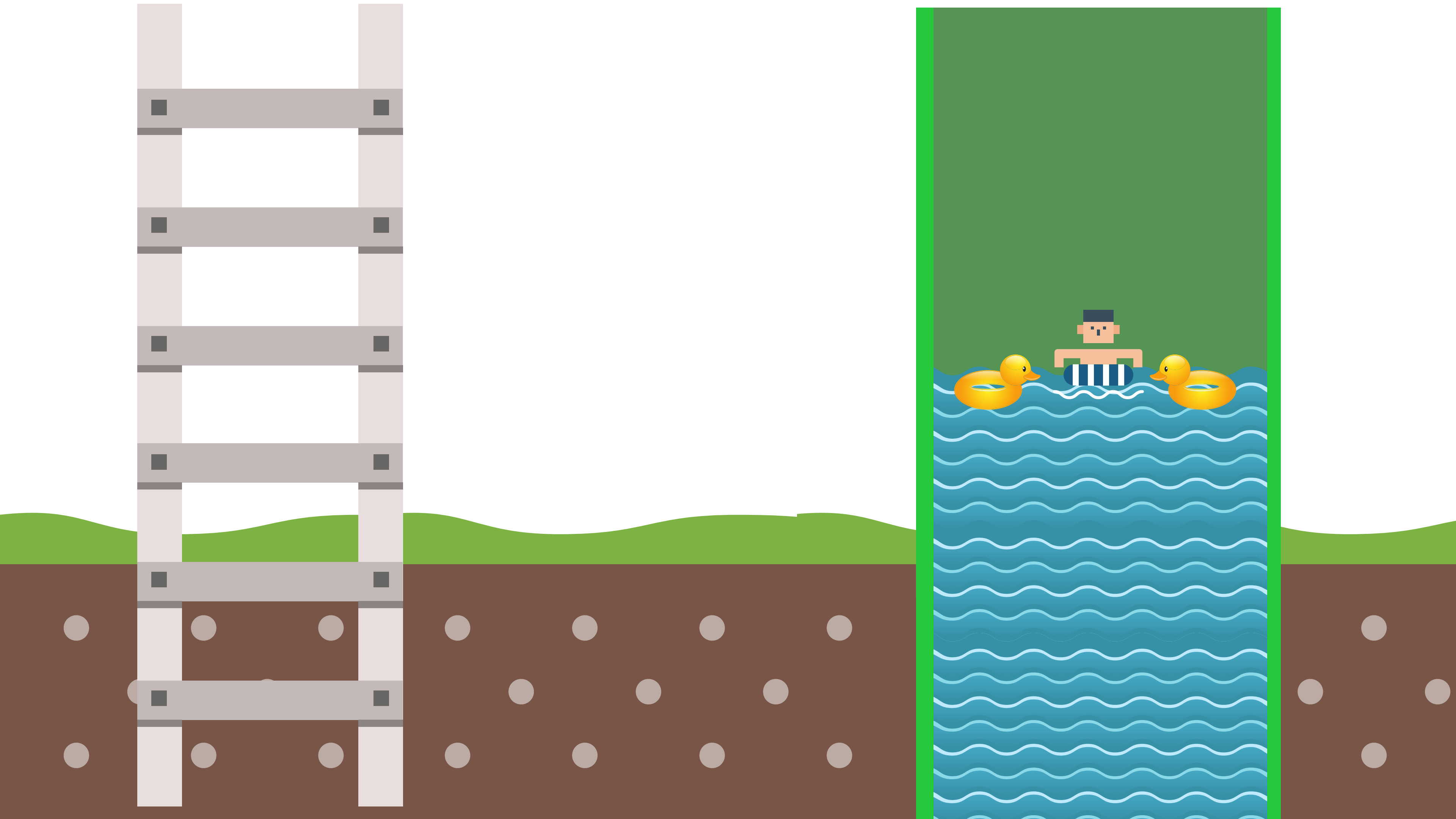
-.2

0.0

0.8372984732894733

1.234987234321e12

04.0



# Ints



1\_000

777



1,000

0777

# Floats



1\_000.55

1.234e12



1,000.55

1.234 e12

# Operators

Operators are special characters in Python that perform operations on value(s). Below are some of the most common:

+

\*

>

<=

and

is

=

\*=

-

/

<

==

or

in

+=

/=

\*\*

%

>=

!=

not

!=

-=

|=



# Order of Operations

Parentheses

( )

Multiplication and Division

\*

/

//

Addition and Subtraction

+

-

Integer Division

//


Exponentiation

\*\*

Modulo

%

# Modulo



```
>>> 38 % 10  
8
```

10 goes into 38...  
3 times, with a remainder of 8

# Integer Division



```
>>> 10 // 3
```

```
3
```



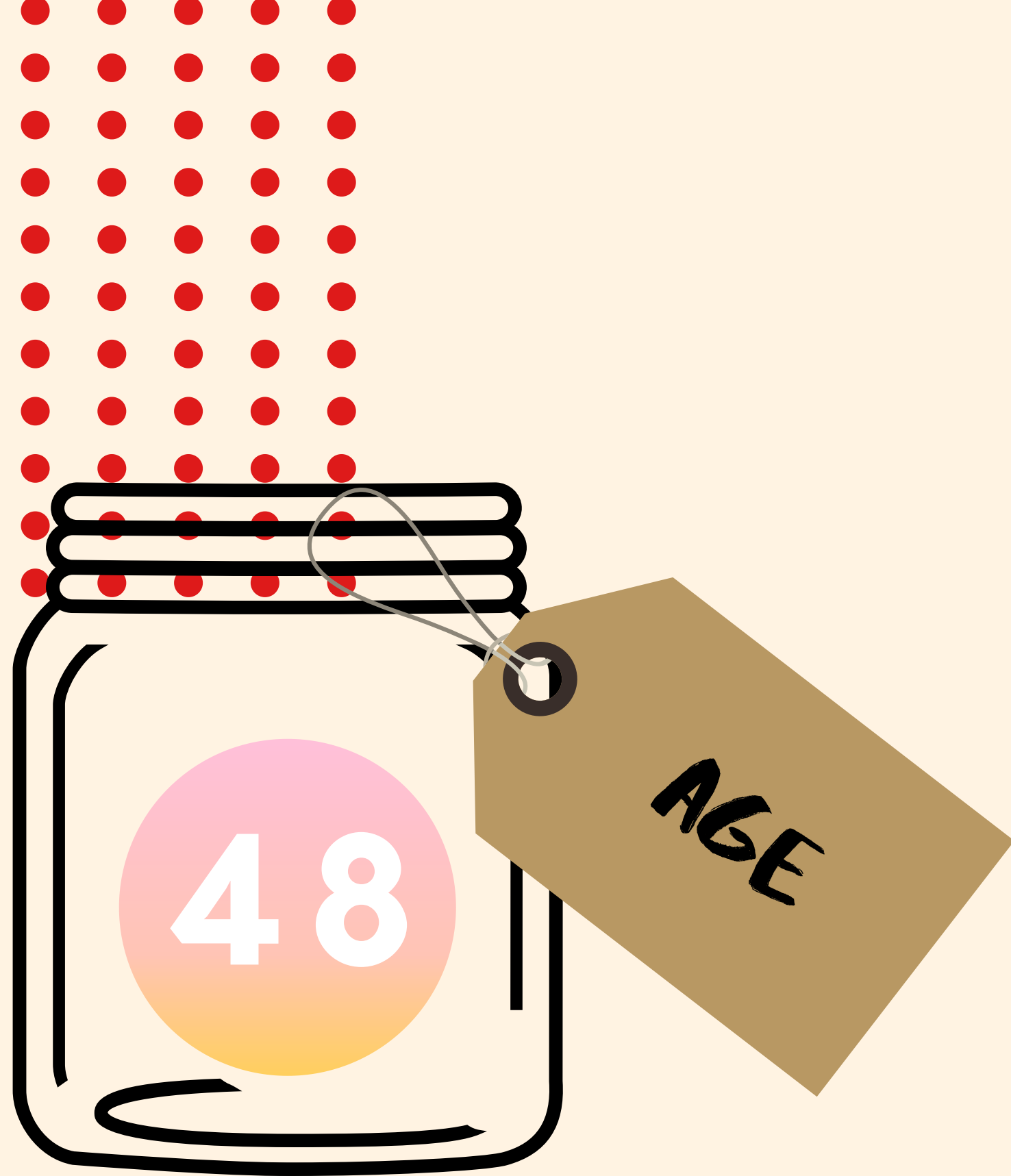
```
>>> -10 // 3
```

```
-4
```

# Comments

```
# this never runs
```

Python will ignore any lines starting with the `#` symbol

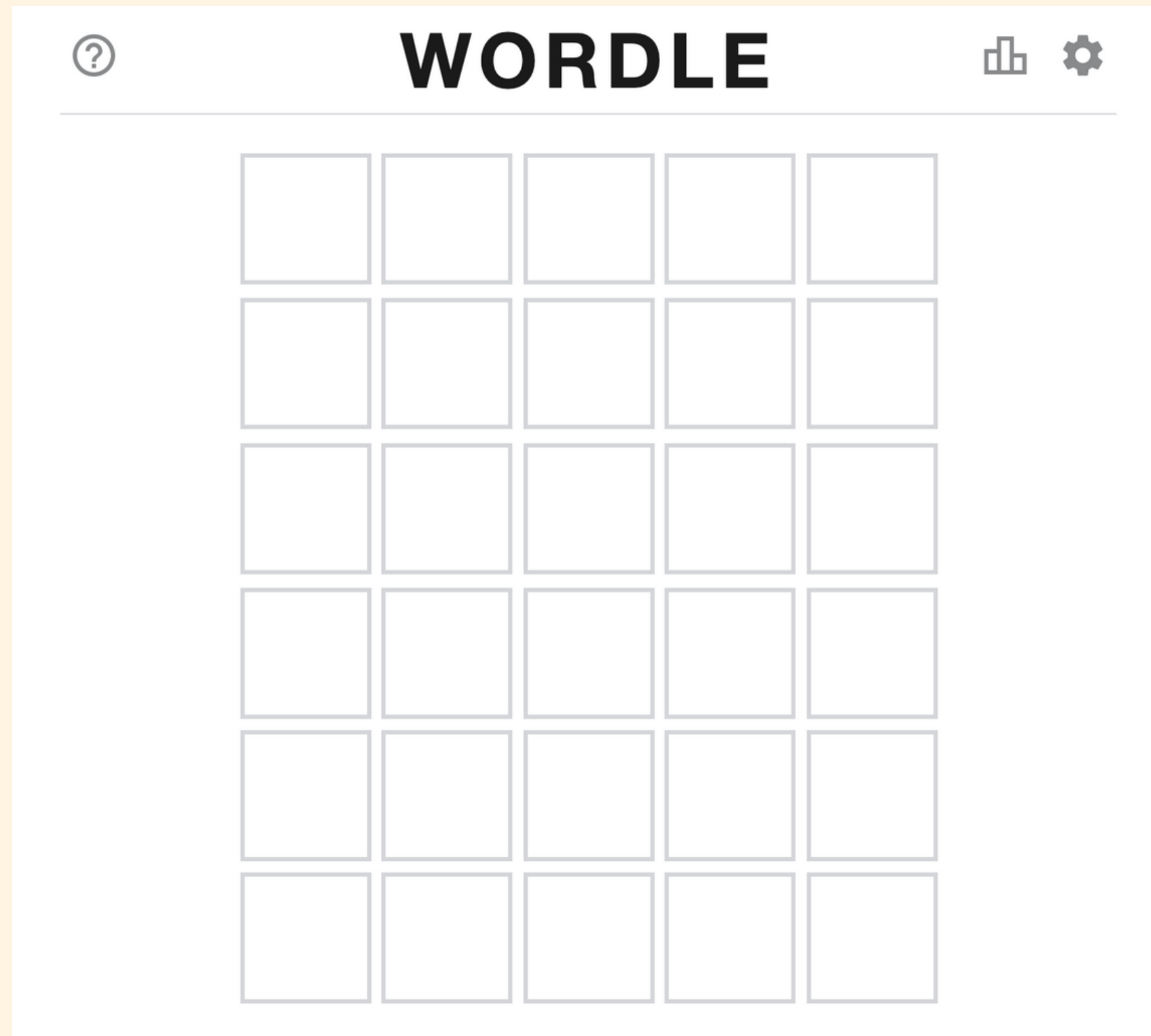


# Variables

## VARIABLES ARE LIKE LABELS FOR VALUES

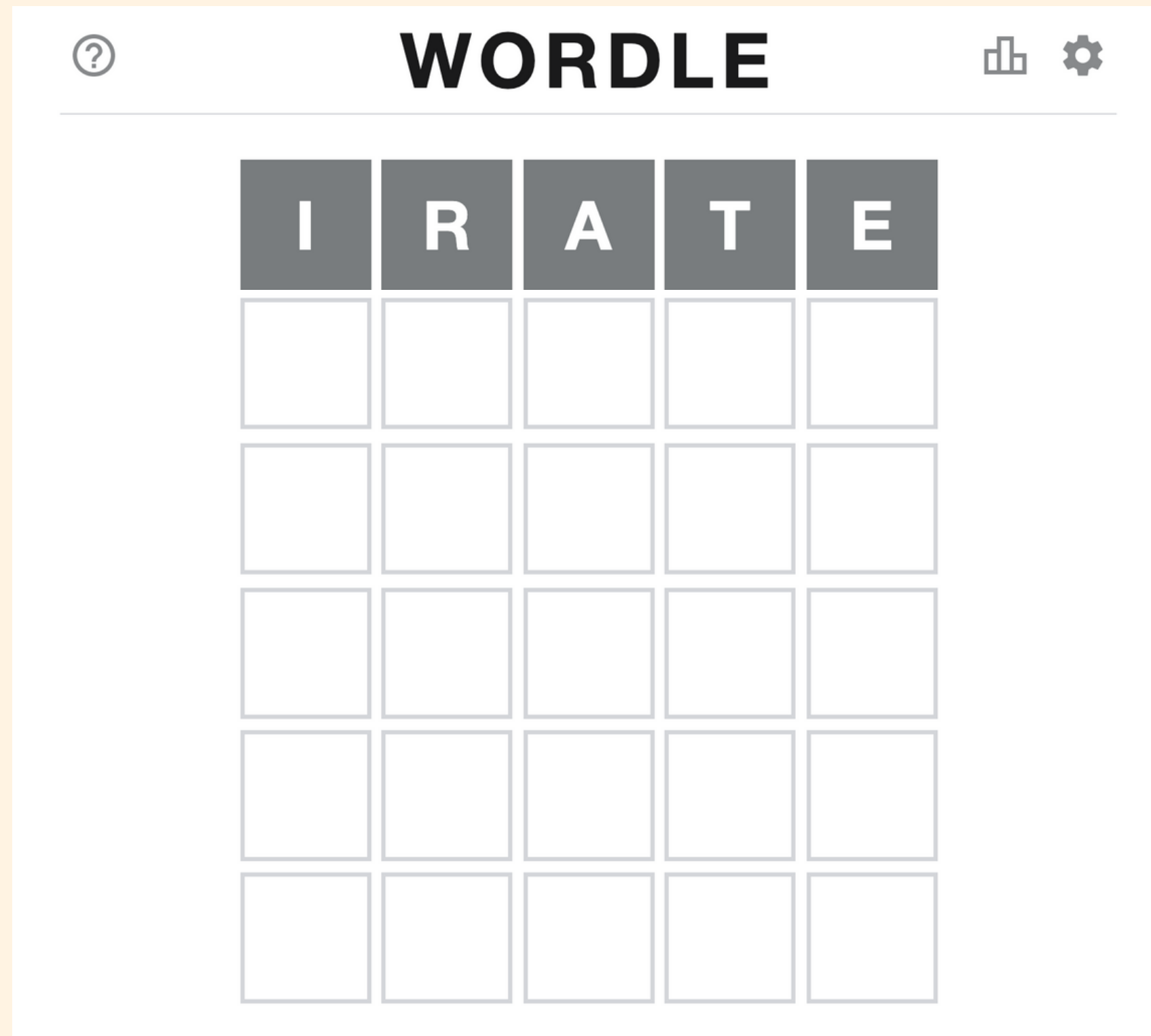
We can store a value and give it a name so that we can:

- Refer back to it later
- Use that value to do...stuff
- Change it later on



# Potential Variables

num_guesses	→	0
target_word	→	"knoll"
max_guesses	→	6
guesses	→	
correct_letters	→	
game_over	→	False



# Potential Variables

num_guesses	→	1
target_word	→	"knoll"
max_guesses	→	6
guesses	→	"irate"
correct_letters	→	
game_over	→	False





# Potential Variables

num_guesses	→	2
target_word	→	"knoll"
max_guesses	→	6
guesses	→	"irate", "sound"
correct_letters	→	"o", "n"
game_over	→	False



# Potential Variables

num_guesses	→	3
target_word	→	"knoll"
max_guesses	→	6
guesses	→	"irate", "sound", "knoll"
correct_letters	→	"o", "n", "k", "l"
game_over	→	True



# Variables



```
>>> age = 48
```



```
>>> score = 170
```

Variable

Assignment

Value





variable123

first\_name

player\_1



123variable

first name

False

def



|

O

x

FirstName

FIRSTNAME



# Python Keywords

```
>>> help("keywords")
```

False	await	else	import	pass
None	break	except	in	raise
True	class	finally	is	return
and	continue	for	lambda	try
as	def	from	nonlocal	while
assert	del	global	not	with
async	elif	if	or	yield



False	raise	in	not	global
True	try	is	with	del
None	except	as	or	assert
for	import	and	class	
while	from	continue	def	
if	pass	yield	finally	
else	break	await	lambda	
elif	return	async	nonlocal	

# How Variables Work

```
>>> count = 170
```

```
>>> total = 170
```

Name

Object

count

total

170

436

606



# How Variables Work

```
>>> count = 170
```

```
>>> total = 170
```

```
>>> count = 436
```

Name

Object

count

total

170

436

606

# How Variables Work

```
>>> count = 170
```

```
>>> total = 170
```

```
>>> count = 436
```

```
>>> total = 606
```

Name

Object

count

170

436

total

606

# How Variables Work

```
>>> count = 170
>>> total = 170
>>> count = 436
>>> total = 606
```

Name

Object

count

total



436

606

# Assignment Operators

**`+=`**

**`-=`**

**`*=`**

**`/=`**

**`//=`**

**`**=`**

**`%=`**



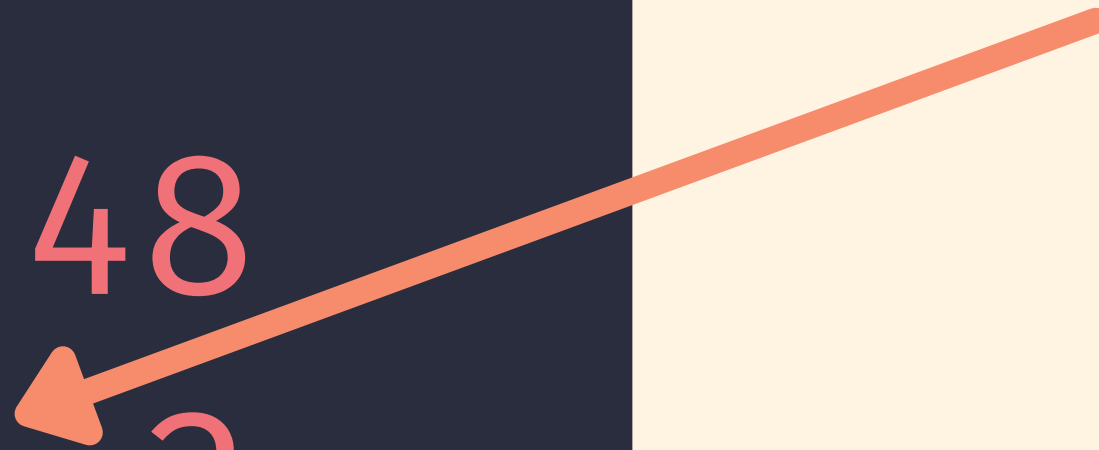
```
>>> age = 48
```

```
>>> age += 2
```

```
>>> age
```

50

Update age to be  
its current value  
(48) plus 2





```
>>> age = 48
```

```
>>> age -= 10
```

```
>>> age
```

```
38
```

Update age to be  
its current value  
(48) minus 10

