Anaconda package

- Core python →
- sklearn →
- Matplotlib →
- Seaborn →
- pandas
- numpy

Coding interface →
- Jupyter Notebook
- Spyder
- Pycharm

↑ arithmetic operations

Datatypes.

- Numeric
  - integral. — int
  - non-integral — float, complex.

- Boolean — bool.
  - ↓ Logical operatn
  - True / False

Case Sensitive -

True → true.

Variables → containers to hold data

Name

dtype

— dynamic typing

C, C++, java

— declare the variables ✓

```
int x;
```

x = 10 ✓

x = 12.5 X

Static Typing

Python

Dynamic Typing

— Variable dtype changes according to what is stored

x = 10

type(x) → int

x = 12.5

type(x) → float

No declaration.

Rules:

(1) Start with alphabets or '_'

[a-z A-Z _]

(2) optionally followed by any no. of alphabets, _, or numbers.

(3) Keywords cannot be used.

if = 25 ✗

while = 30 ✗

x → ✓

x$ = 50 ✗

9th_day = 'Tuesday' ✗

day9 = 'Tuesday' ✓

--x = 35 ✓

--x-- = 45 ✓

} Python internally-

_ = 78 ✓

Conventions:

(1) classes → Capital letters

Account → } Title case

BankAccount → }

accountBalance → Camel case.

Packages → lowercase

Variables, fns → lowercase_case ✓

my_var, ✓ my_fn() ✓

Arithmetic operations.

- + - Addition
- − - Subtraction
- * - Multiplication
- / - Division.
- // — Floor division
- % — Modulo division
- ** → Power.

$x = 10;\ y = 3$

$x + y = 13$

$x - y = 7$

$x / y = (3.3333) \rightarrow$

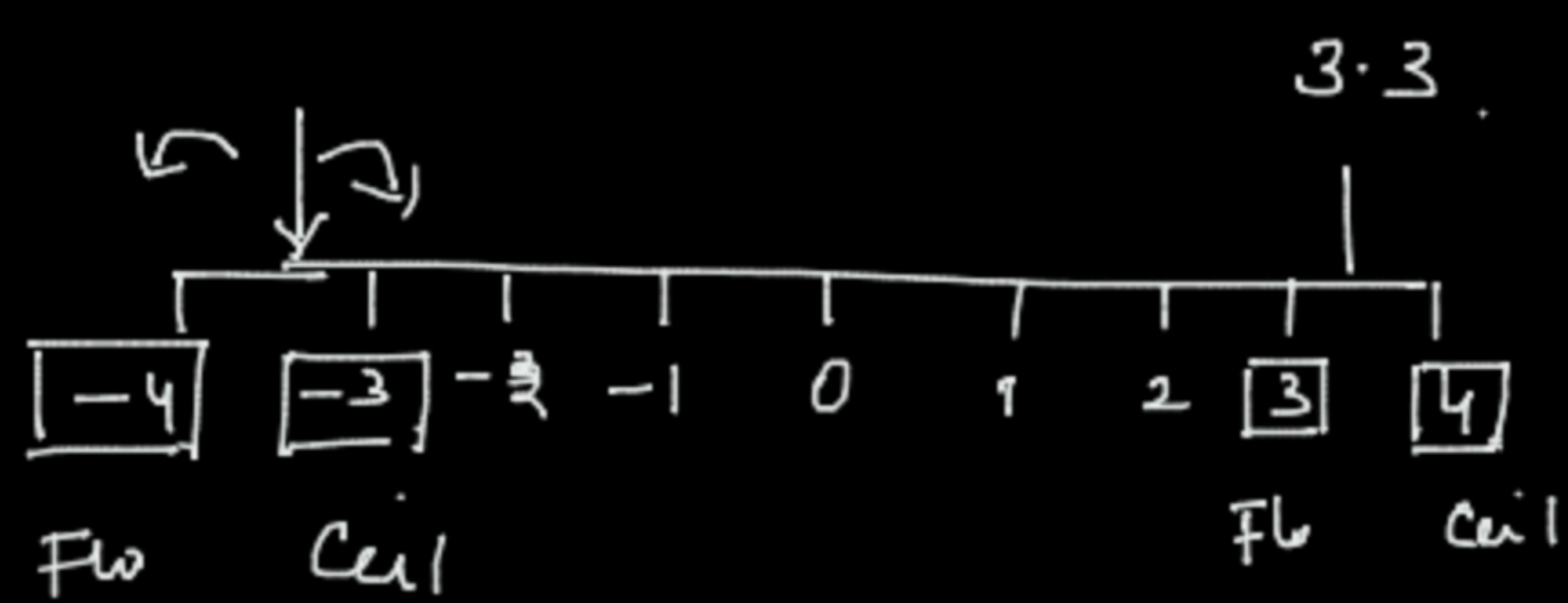
$x \% y$ = Remainder
= 1

$x ** y$

$10^3 \rightarrow 1000$.

3) 10 (3
3
―
1 → Remainder

$x // y$ → Floor the result
3.



	round	floor	ceil.
3.3	3.0	3.0	4.0
3.8	4.0	3.0	4.0
−3.3	−3.0	−4.0.	−3.0

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Boolean / logical operations

— AND, OR. (Combine two Conditions)
— Not. (inverse)

OR

C1 → B.Tech.
C2 → 5 yrs.

and.

C1	C2	OR	AND
True	False	True	False
False	True	True	False
True	True	True	True
False	False	False	False