CS150 - Basic Data Types

Note Title 1/24/2012

Announcements

- Help session : Tuesday 5pm
  Additional sessen: Tuesday afternoon
  Thursday
  Tuesday 12:36
- First HW - due Sat.

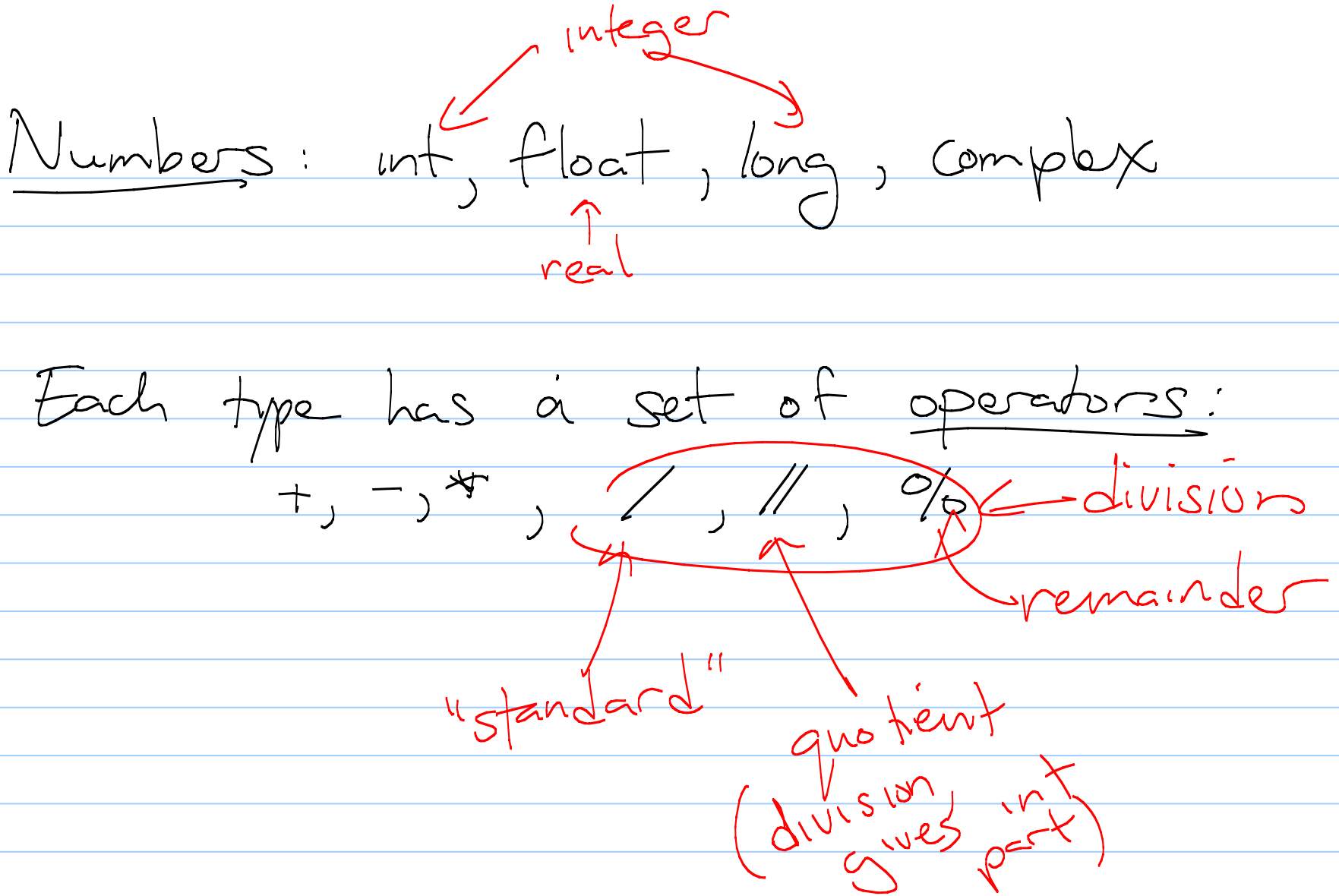
Data Types in Python

Ch. 2

$(100)_2 = 4$

Python has many useful built-in ways to represent data.

Ex:
- Numbers
  - Many types: integers (up to a max value)
    - 32-bit: $2^{32}-1$
    - long (up to 64-bits)
  - real # - float, complex
- Strings - words
- Lists


Numbers: int, float, long, complex
integer
real
Each type has a set of operators:
+, -, *, /, //, %
division
remainder
"standard"
quotient
(division gives int part)

Lists: a built in class

Create a list:

```
groceries = list()
```

lower case

groceries = variable name

list() = constructor

groceries = []

Available Functions - See p. 42 in Ch. 2

- append (value)
- insert (position, value)
- remove (value)
- len (listname)
- count
- pop()
- reverse()
- ⋮

- Write a short program that will rearrange a list into reverse alphabetical order

- Write a statement that takes a list named "houses" and creates a new list "somehouses" which contains every other entry

- Make a list ['orange', 'banana', 'grape']
  + replace banana with 'lime' in 2 different ways