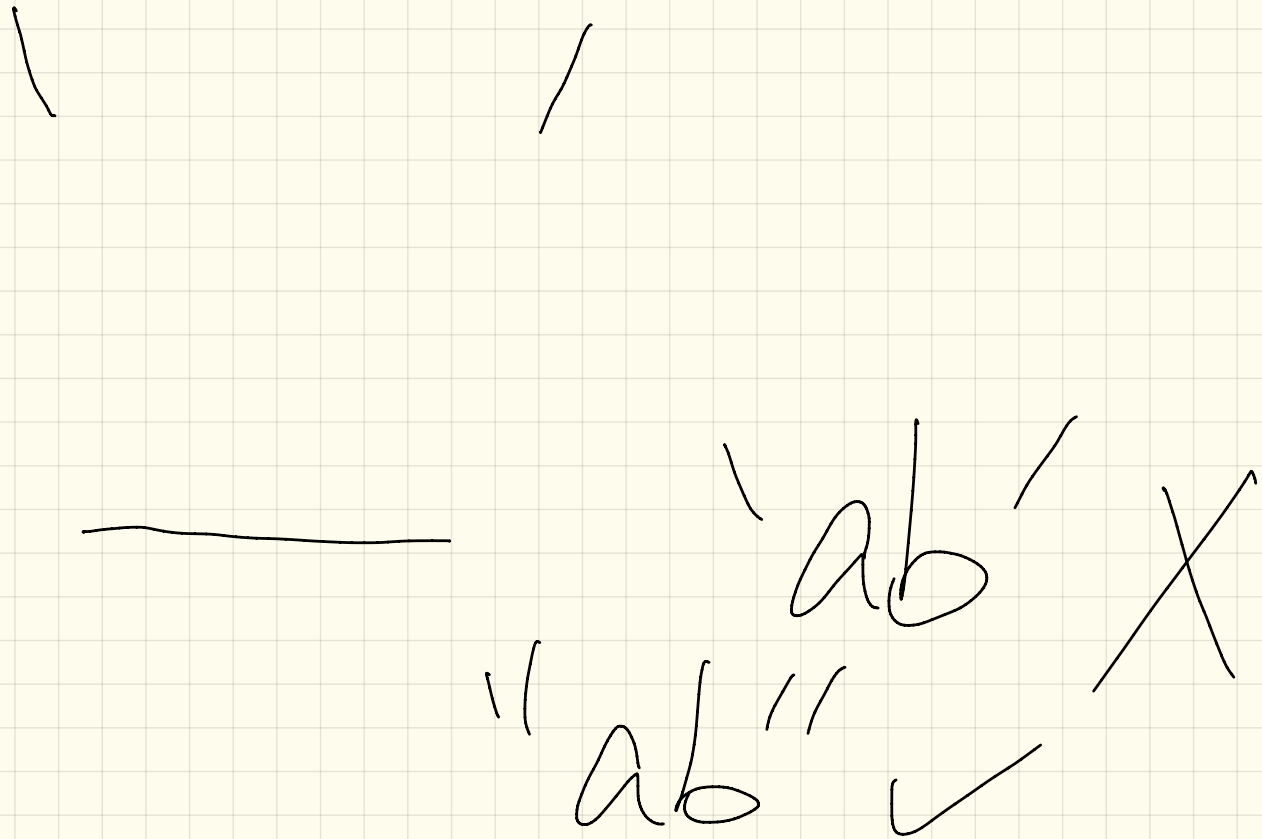
Monday, Jan. 8

Lecture I


'ab'
"ab"

Math

Integer 3 int

fractional

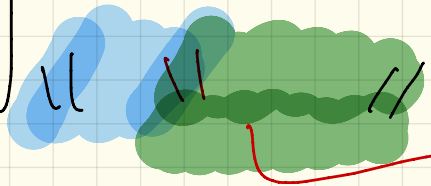
Real 3 14 double

Java

2 integer

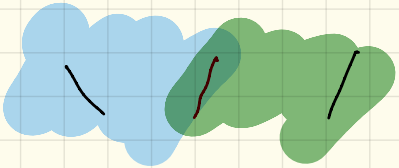
2.0 double

String literal



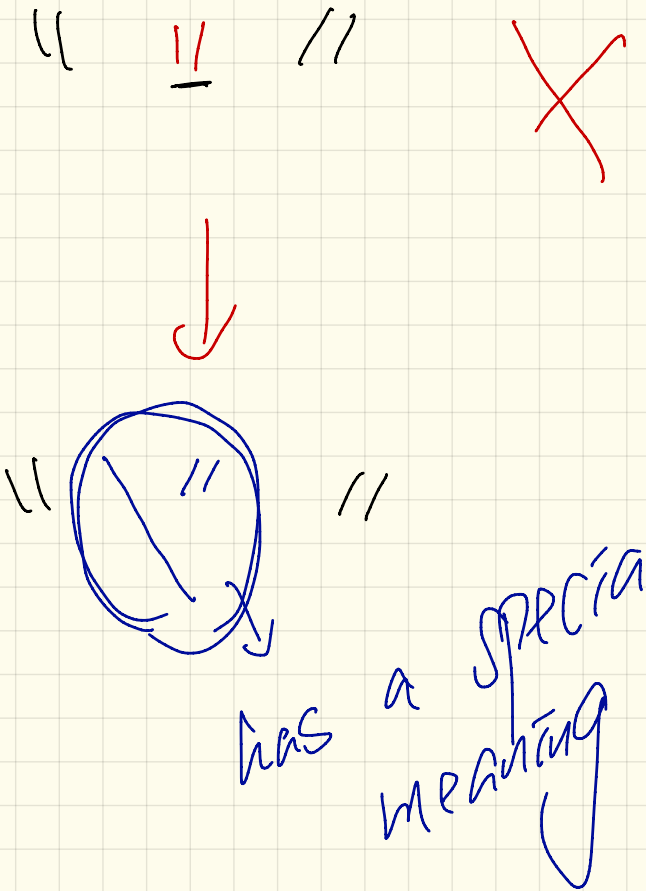
(enclosed within matching double quotes)

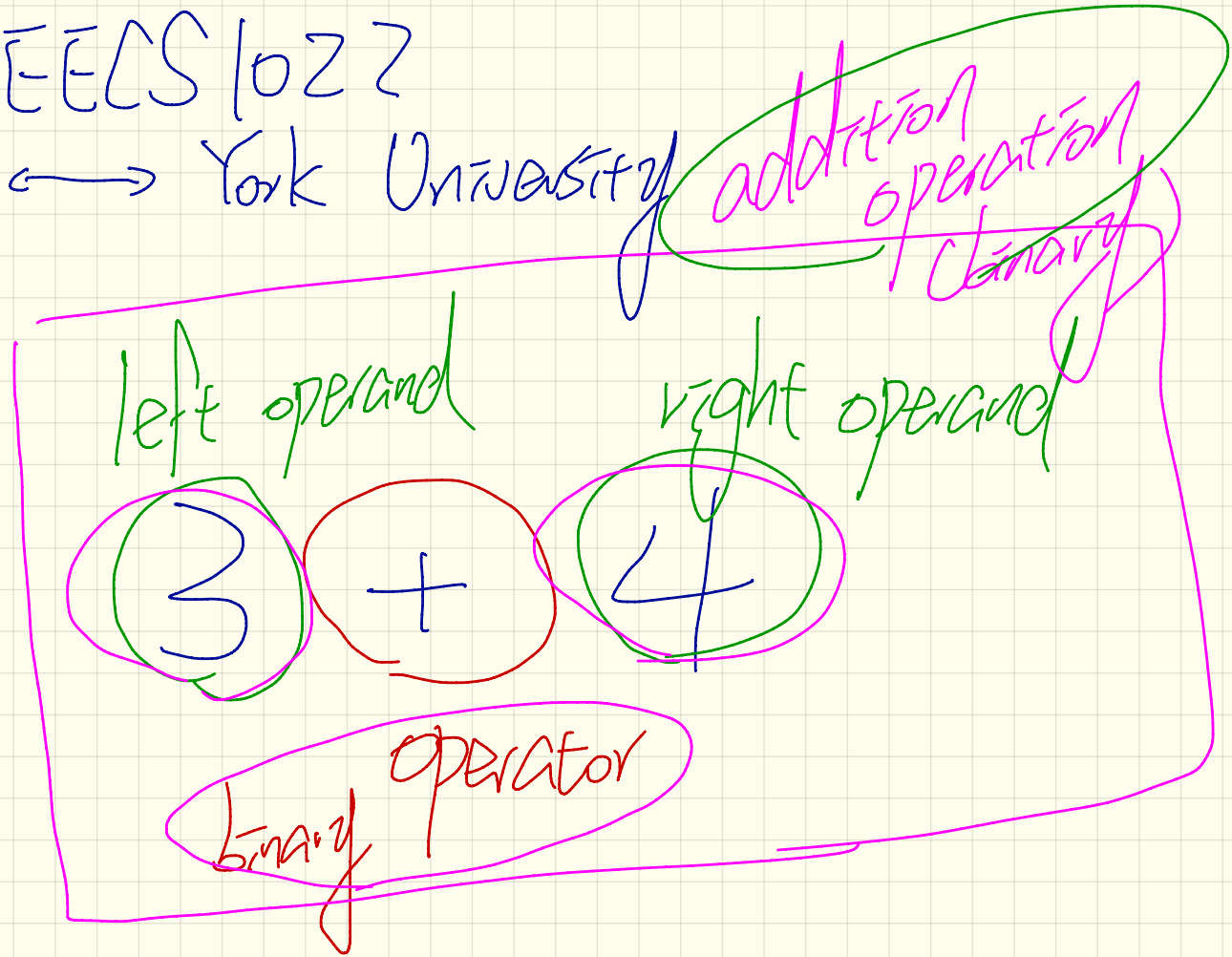
character literal

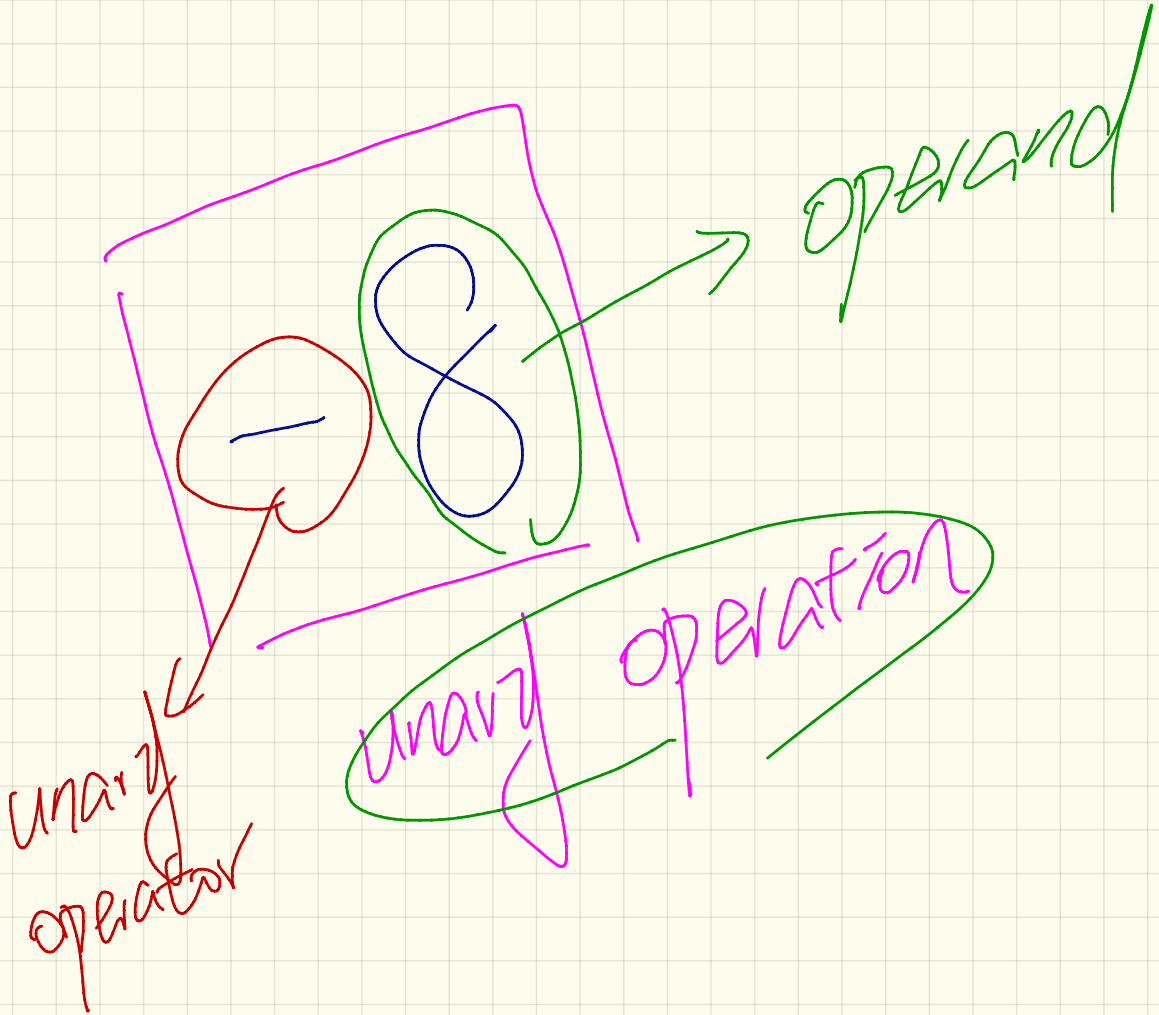


The compiler gets confused

⇒ disambiguate usage escape seq.


has a special meaning to the compiler: a double quote


EECS1022
York University
addition operation
binary
left operand
right operand
3
+
4
binary operator


operand
unary operation
unary operator

① 13 / 4 = 3

② 13.0 / 4 = 3.25

3
3.25

Division in Java

LO / RO

1. If the LO and RO are both integers, evaluate the quotient.
2. Otherwise, evaluate mathematically.

13 / 4 3

13.0 / 4 3.25

13 / 4.0 3.25

12.0 / 4.0 3.25

13 / 4 = 3

quotient

/

remainder.

13 % 4

modulo

$$(13 / 4) * 4 + (13 \% 4)$$

3

1

12

13

Given integers a, b

$$(a / b) * b + (a \% b)$$

$$\Vert$$

$$\Vert$$

$$a$$

Math	Java
=	==
>	>
<	<
≥	>=
≤	<=

The plus (+) operation has two possible meanings:

① 2 + 3 = 5

int addition int

② "a" + "b" "ab"

concatenation

"1" + "2" "12"

3

String

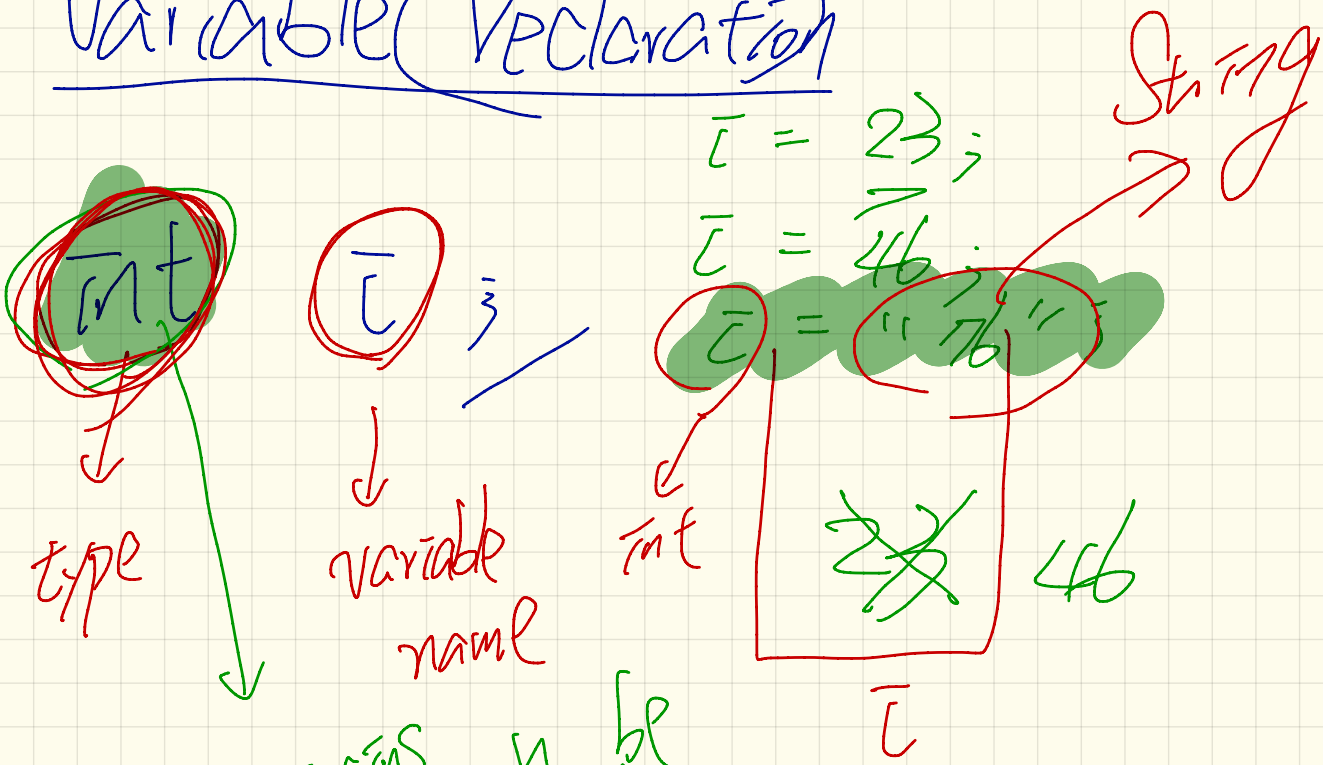
"EECS" + 1022

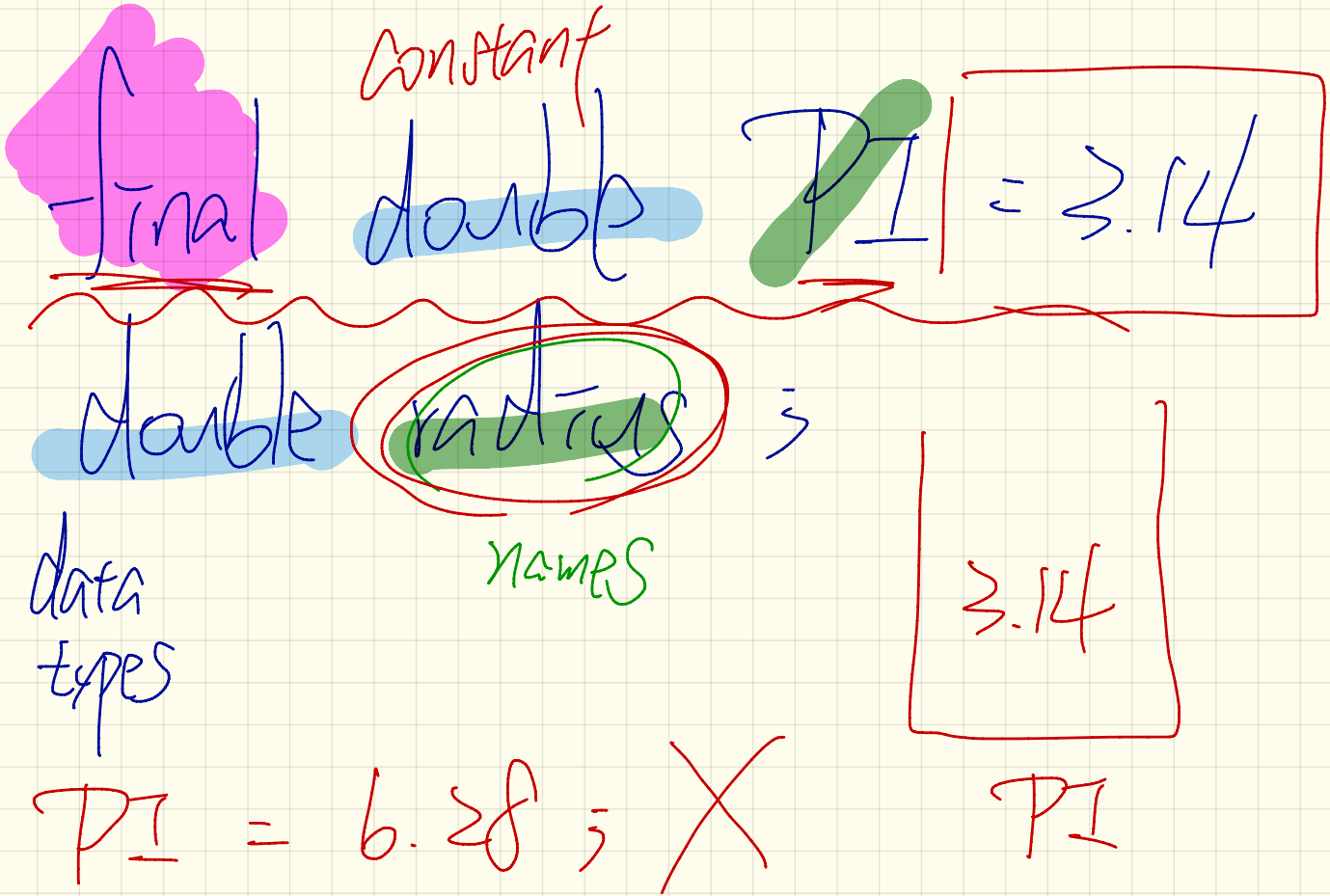
EECS1022

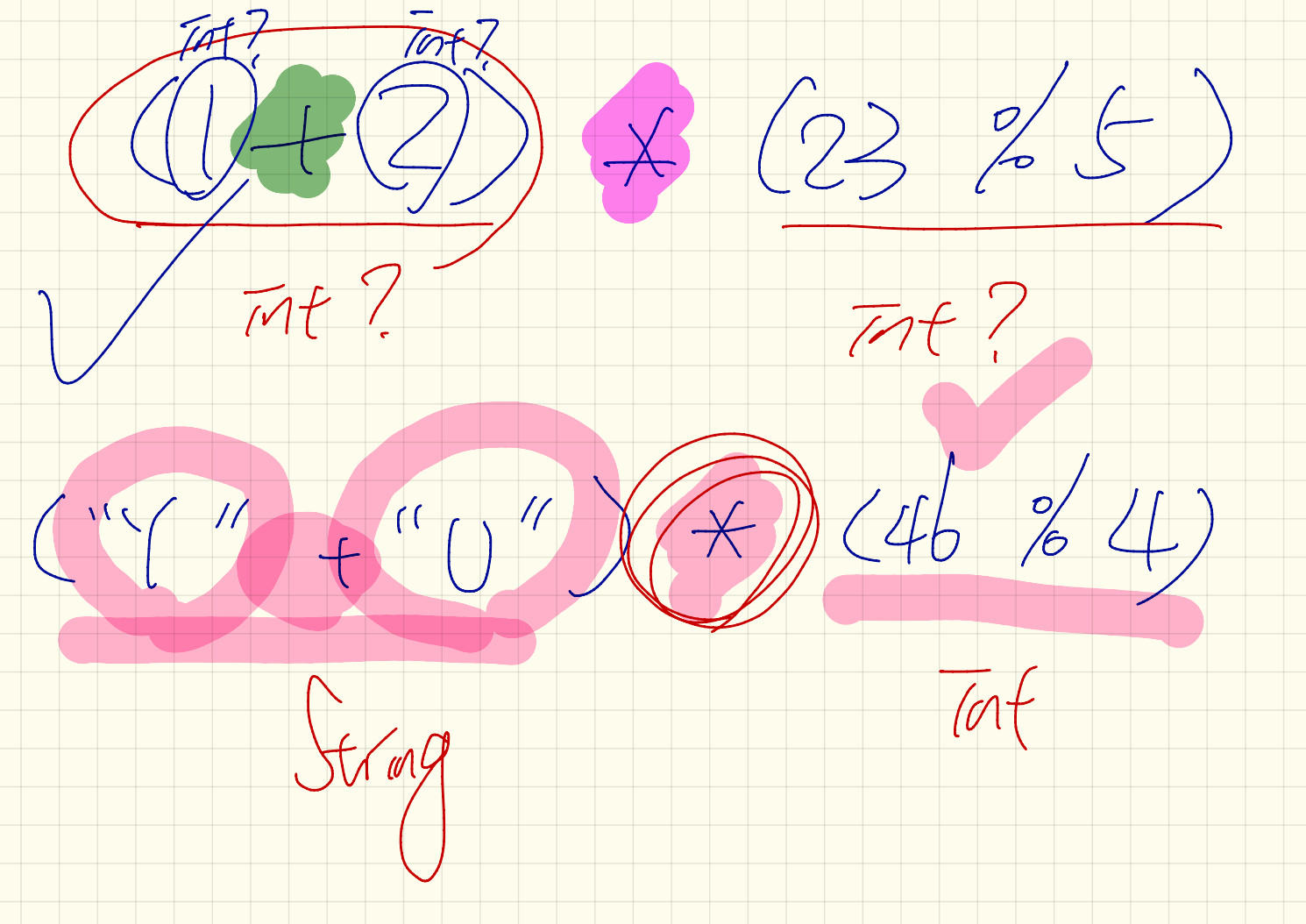
"1022" + 23 →

102223

Variable Declaration




final
constant
double
PI = 3.14
double
radius ;
names
data types
3.14
PI = 6.28 ; X
PI


int?
int?
(1 + 2)
*
(23 % 5)
int?
int?
("(" + ")")
*
(46 % 4)
String
int