

# CSE 143X Section Handout #1 Cheat Sheet

## Primitive types (2.1)

Type	Description	Examples
int	integers	42, -3, 92851
double	real numbers	3.14, 2.0
char	a character of text	'a', 'X', '\n'
boolean	logical values	true, false

## Expressions (2.1)

- *precedence*: () before \* / % before +-
- with int, / is integer quotient and % is integer remainder
- Strings can be *concatenated* with other values

$1 * 2 + 3 * 5 / 4$ $2 + 3 * 5 / 4$ $2 + 15 / 4$ $2 + 3$ $5$	$"\$" + 9.0 / 4.0 + 1$ $"\$" + 2.25 + 1$ $"\$2.25" + 1$ $"\$2.251"$
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Arithmetic Operators	
Operator	Meaning
+	addition
-	subtraction, negation
*	multiplication
/	division
%	remainder ("modulus")

## Variables (2.2)

**type name;** *declaration (creates a variable but doesn't give it any value)*  
**name = value;** *assignment (stores a value into a variable)*

**type name = value;** *declaration/initialization (creates a variable and stores a value into it)*

```
int x;
int y = 3;
x = 1 + y * 2;    // x stores the value 7
```

## The for loop (2.3)

*(repeats a group of statements a fixed number of times)*

```
for (initialization; test; update) {
    statement;
    statement;
    ...
    statement;
}

for (int i = 1; i <= 10; i++) {
    System.out.println(i + " squared is " + (i * i));
}
```

## Nested for loops (2.3)

```
for (int line = 1; line <= 5; line++) {
    for (int j = 1; j <= (-1 * line + 5); j++) {
        System.out.print(".");
    }
    System.out.println(line);
}
```

....1
...2
..3
.4
5

## Class constants (2.4)

```
public static final type name = value;
public static final int DAYS_PER_WEEK = 7;
```