CS 157 Lab 2 September 30, 2009
Expressions and Variables

Expressions

1. Compute the value of each expression below. Be sure to list a literal of appropriate type (e.g., `7.0` rather than `7` for a `double`, string literals in quotes).

Expression	Expression
`4 * 3/8 + 2.5 * 2`	`(2.5 + 3.5)/2`
`26 % 10 % 4 * 3`	`9/4 * 2.0 - 5/4`
`(5 * 7.0/2 - 2.5)/5 * 2`	`3 * 4 + 2 * 3`
`12/7 * 4.4 * 2/4`	`177 % 100 % 10/2`
`"hello 34 " + 2 * 4`	`9/2.0 + 7/3 - 3.0/2`
`"2 + 2 " + 3 + 4`	`813 % 100/3 + 2.4`
`41 % 7 * 3/5 + 5/2 * 2.5`	`89 % (5 + 5) % 5`
`10.0/2/4`	`392/10 % 10/2`
`17 % 10/4`	`8 * 2 - 7/4`
`6 * 7%4`	`2 * 3/4 * 2/4.0 + 4.5 - 1`

2. Read in the text pages 62-63 on **Casting**. Then compute the value of each expression below.

`(int) 2.75`	`75 / 100 * 100.0`
`(double) 75 / 100 * 100`	`(double) (75 / 100 * 100)`
`(int) 2.2 / 1.1`	`(int) (2.2 / 1/1)`

   Write an expression that computes the number of people (as a whole number) who can stand in a line if each person requires 1.5 feet and the line is 16.7 feet long.

Variables

3. What is the output from the following code?

```
int max;
int min = 10;
max = 17 - 4 / 10;
max = max + 6;
min = max - min;
System.out.println(max * 2);
System.out.println(max + min);
System.out.println(max);
System.out.println(min);
```

4. What are the values of the variables `a`, `b`, and `c` after the following code? (What is the code really doing?)

```
int a = 3;
int b = 7;
int c = 9;
a = a * b * c;
b = a / b / c;
c = a / b / c;
a = a / b / c;
```