

# Homework 1.1

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## Problem 1.1.1

**a**  $(0 + 15)/2 = 7$

**b**  $0.000002 * 100000000.1 = 200.0000002$

**c**  $true \&\& false || true \&\& true = false$

## Problem 1.1.2

**a**  $(1+2.236)/2=1.618$ , double

**b**  $1+2+3+4.0=9.0$ , double

**c**  $4.1 \geq 4 \rightarrow true$ , boolean

**d**  $1 + 2 + "3" = 33$ , String

## Problem 1.1.3 coded

## Problem 1.1.4

**a** no need for 'then'

**b** need parenthesis around boolean statement

**c** ok

**d** need semicolon after  $c=0$

## Problem 1.1.5

```
if(0 < x && x < 1 && 0 < y && y < 1)
    System.out.println("true");
else
    System.out.println("false");
```

## Problem 1.1.6

0 1 ...repeated 8 times

## Problem 1.1.7

**a** 3.0000

**b**  $\sum_{i=1}^{1000} i = \frac{1000^2 + 1000}{2} = 500500$

**c**  $(\lg 1000) \times 1000 = 9 \times 1000 = 9000$

**Problem 1.1.8**

**a** b

**b** 197

**c** e

**Problem 1.1.9** coded

**Problem 1.1.10**

a[] was never initialized

**Problem 1.1.11** coded

**Problem 1.1.12**

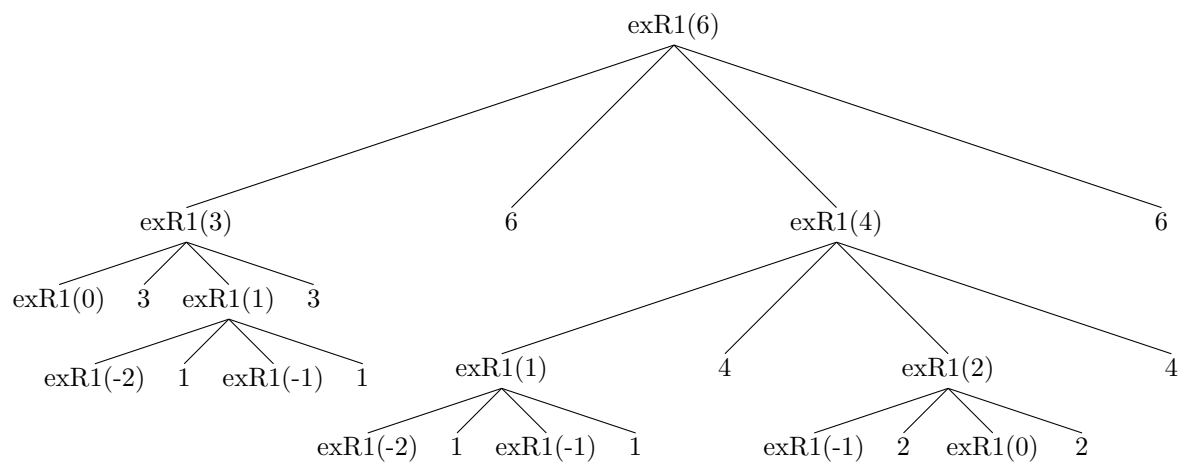
0 1 2 3 4 5 6 7 8 9

**Problem 1.1.13** coded

**Problem 1.1.14** coded

**Problem 1.1.15** coded

**Problem 1.1.16**



To get the answer, do an inorder traversal of the above tree. output: 311361142246

**Problem 1.1.17**

The base case will never be reached.

**Problem 1.1.34**

- Filter. Keep a max/min int, compare to each value in stream.
- Array. Because we don't know how many ints are in the stream, we need to keep track of all of them.
- Array. We don't know how many ints are in the stream.
- Filter.
- Filter.
- Filter.
- Array.
- Array. Depends on how random the output needs to be.