

## Homework

### Grade 11 Review 1 – Assignment, BEDMAS

1. Trace through the following code segments and illustrate the output and memory.

a)

<pre>int a = 3; int b = 9; System.out.println(b); a = b + 2; a = a + b; System.out.println(b+3); System.out.println(a);</pre>	<b>Output</b> 9 12 20	<b>Memory</b> a (int): <del>3</del> 11 20 b (int): 9
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b)

<pre>int ans = 10; int res = 6; int num; num = ans + res; System.out.println(num + 2); res = num + 3; System.out.println(res);</pre>	<b>Output</b> 18 19	<b>Memory</b> ans (int): 10 res (int): 19 num (int): 16
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2. Circle the assignment statements that will cause errors

```
int a = 6;
int b = 3;
float c = 3.5;
char e = 'd';
int f;
```

// consider each of the following lines individually; assume the initial values given above

```
a = 4;
```

```
b = a + b;
```

```
c = a + b;
```

```
e = e;
```

```
e = 'h';
```

```
b = f;
```

3. Write a program that reads three double values and computes their average.
4. Write a program that calculates the number of hours of your life that you have spent sleeping. Assume that you sleep 8 hours each night. To simplify the problem, assume that there are 30 days in each month and 365 days in each year. The program output should look similar to:  

```
Enter your birthdate:  
Year: 1990  
Month: 9  
Day: 8  
Enter today's date:  
Year: 2006  
Month: 2  
Day: 12  
You have been alive for 5634 days.  
You have slept 45072 hours.
```
5. A fast food restaurant charges \$1.69 for burgers, \$1.09 for fries, and \$0.99 for sodas.
  - a) Write a program that prompts the employee for the number burgers, fries, and sodas and then displays the totals, the PST (8%), the GST (5%), and the final cost.
  - b) Modify the program to prompt the employee for the amount tendered and then display the change due.
6. Write a program that asks the user for a three-digit number, finds the sum of the digits of the number, and then prints both the number and its digit sum.

Reference for questions 3, 6

Carter, John. An Introduction To Computer Science Using Java. Toronto: University of Toronto Press, 2003

Reference for questions 4, 5

Brown, Beth. A Guide to Programming in Java, 2<sup>nd</sup> Edition, for Java SE5 and Java SE6. Pennington: Lawrenceville Press