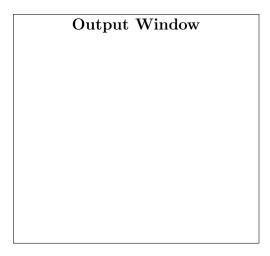
## CS-200-1: Programming I Fall 2014

## Northeastern Illinois University In-Class Exercise: Numeric Variables & Operations

- 1. Determine the result of the following remainder operations:
- (a) 56 % 6
- (b) 78 % 4
- (c) -34 % 5
- (d) 34 % -5
- (e) 5 % 1
- (f) 1 % 5
- 2. Determine the result of the following mathematical expressions:
- (a)  $3 + 6 \times (5 + 4) \div 3 7$
- (b)  $9-5 \div (8-3) \times 2+6$
- (c)  $150 \div (6+3\times 8) 5$

**3.** Trace through the following code and determine the output that is printed to the console. (Hint: It may help to create a memory window to keep track of the changes to the variables.)

```
public class TracingProblem
{
    public static void main(String[] args)
    {
        int a = 6;
        int b = a + 1;
        System.out.println(a);
        System.out.println(b);
        a -= 2;
        b = a++;
        b--;
        System.out.println(a);
        System.out.println(b);
    }
}
```



**4.** Write a program that takes a number (an integer) in cents and returns the minimum number of coins (quarters, dimes, nickels, pennies) that is needed to make up the total value.

## Sample Output

```
Enter an integer value in cents: 84
You need: 3 quarters, 0 dimes, 1 nickel and 4
pennies
```

```
Enter an integer value in cents: 68
You need: 2 quarters, 1 dimes, 1 nickel and 3
pennies
```