HW1 Code – Alon Morad

1. AddTwo

```
/*
 * Adds two given integers and prints the result in a fancy way.
 */
public class AddTwo {
	public static void main(String[] args) {
		// declares two int variables and gets them from user
		int a = Integer.parseInt(args[0]);
		int b = Integer.parseInt(args[1]);
		// prints the sum
		System.out.println(a + " + " + b + " = " + (a+b));
	}
}
```

2. Coins

```
/*
 * Write a program that gets a quantity of cents as a command-line argument.
 * The program prints how to represent this quantity using as many quarters as possible, plus the remainder in cents.
 */
public class Coins {
	public static void main(String[] args) {
		// declares int variable and gets it from user
		int cents = Integer.parseInt(args[0]);
		// prints the amout of quarters and cents the user needs
		System.out.println("Use " + cents/25 + " quarters"
				+ " and " + cents%25 + " cents");
	}
}
```

3. Linear Equation Solver

```
/*
 * Solves linear equations of the form a·x + b = c.
 * The program gets a, b, and c as command-line arguments,
 * computes x, and prints the result.
 * Treats the three arguments as well as the computed value as
double values
 */


public class LinearEq {
     public static void main(String[] args) {
          // declares three double variables and gets them from
user
          double a = Double.parseDouble(args[0]);
          double b = Double.parseDouble(args[1]);
          double c = Double.parseDouble(args[2]);
          // prints the equation and its solution
          System.out.println(a + " *" + " x" + " + " + b + " = " +
c);
          System.out.println("x " + "= " + ((c-b)/a));
     }
}
```

4. Triangle

```
/*
 * Three sides can form a triangle if the sum of the lengths of any two sides is greater than the length of the remaining side.
 * This is known as the Triangle Inequality Theorem.
 * Write a program that tests if three given integers form a triangle.
 */
public class Triangle {
	public static void main(String[] args) {
		// declares three int variables and gets them from user
		int a = Integer.parseInt(args[0]);
		int b = Integer.parseInt(args[1]);
		int c = Integer.parseInt(args[2]);
		// declares boolean variable
		boolean possible;
		// checks if triangle is valid by rules
		if (a+b > c && a+c > b && b+c > a)
			possible = true;
		else
			possible = false;
		// prints the sides and if triangle is possible
		System.out.println(a + ", " + b + ", " + c + ": " + possible);
	}
}
```

5. Gen3

```
/*
 * Generates three random integers, each in a given range [a,b),
 * prints them, and then prints the minimal number that was generated.
 */
import java.util.Random;
public class GenThree {
	public static void main(String[] args) {
		// declares two int variables and gets them from user
		int a = Integer.parseInt(args[0]);
		int b = Integer.parseInt(args[1]);
		// creates the range
		int range = b - a;
		// generating three random numbers in range and prints them
		// using random from math lib, generates number between 0-1
		int first = (int) ((Math.random() * range) + a);
		int second = (int) ((Math.random() * range) + a);
		int third = (int) ((Math.random() * range) + a);
		System.out.println(first);
		System.out.println(second);
		System.out.println(third);
		// declaring int variable and sets its value by min function of math class
		int min = Math.min(first, second);
		// checks if third number is smaller than the first&second numbers, if it does its sets as his new value
		min = Math.min(min, third);
		// prints the minimal number that was generated in range
```

```
            System.out.println("The minimal generated number was: " +
min);
      }
}
```