Ohad's Homework 2

Divisors

```
public class Divisors {
	public static void main (String[] args) {
		int num = Integer.parseInt(args[0]);
		for(int i = 1; i <= num; i++ )
		{
			if(num%i == 0)
				System.out.println(i);
		}

	}
}
```

Reverse

```
public class Reverse {
	public static void main (String[] args){
		String rev = args[0];
		for(int i = (rev.length() - 1); i >= 0; i--){
			System.out.print(rev.charAt(i));
		}
		System.out.println();
		if(rev.length()%2 == 0){
			System.out.println("The middle character is " +
rev.charAt((rev.length()/2) - 1));
		}
		else{
			System.out.println("The middle character is " +
rev.charAt(rev.length()/2));
		}
	}
}
```

InOrder

```
public class InOrder {
	public static void main (String[] args) {
		double lowRand = (Math.random()*10);
		System.out.print((int)(lowRand) + " ");
		double newRand = (Math.random()*10);
		while(lowRand <= newRand) {
			System.out.print((int)(newRand) + " ");
			lowRand = newRand;
			newRand = (Math.random()*10);
		}
	}
}
```

DamkaBoard

```
public class DamkaBoard {
	public static void main(String[] args) {
		int num = Integer.parseInt(args[0]);
		for(int i = 1; i <= num; i++)
		{
			for(int j = 1; j <= num; j++)
			{
				if(i%2 == 1)
					System.out.print("* ");
				else
					System.out.print(" *");
			}
			System.out.println();
		}
	}
}
```

Perfect

```
public class Perfect {
	public static void main (String[] args) {
		int num = Integer.parseInt(args[0]);
		int sum = 1;
		String perfect = num + " is a perfect number since " +
num + " = 1";
		for(int i = 2; i < num; i++ )
		{
			if(num%i == 0)
			{
				sum = sum + i;
				perfect = perfect + " + " + i;
			}
		}
		if (sum == num)
			System.out.println(perfect);
		else
			System.out.println(num + " is not a perfect
number");
	}
}
```

OneOfEachStats

```
public class OneOfEachStats {
      public static void main (String[] args) {
            int num = Integer.parseInt(args[0]);
            int seed = Integer.parseInt(args[1]);
         Random generator = new Random(seed);
            boolean girl = false;
            boolean boy = false;
            int two = 0;
            int three = 0;
            int four = 0;
            int count = 0;
            double avg = 0;
            double rand = 0;
            for(int i = 1; i <= num; i++){
                  while((boy != true) || (girl != true)){
                        if(generator.nextDouble() < 0.5){
                              count++;
                              girl = true;
                        }
                        else{
                              count++;
                              boy = true;
                        }
                  }
                  avg = avg + count;
                  if(count == 2){
                        two++;
                  }
                  if(count == 3){
```

```
                    three++;
                }
                if(count >= 4){
                    four++;
                }
                girl = false;
                boy = false;
                count = 0;
            }
            avg = avg/num;
            System.out.println("Average: " + avg + " children to get
at least one of each gender.");
            System.out.println("Number of families with 2 children: "
+ two);
            System.out.println("Number of families with 3 children: "
+ three);
            System.out.println("Number of families with 4 or more
children: " + four);
            if((two > three) && (two > four)){
                System.out.println("The most common number of
children is 2.");
            }
            if((three > two) && (three > four)){
                System.out.println("The most common number of
children is 3.");
            }
            if((four > two) && (four > three)){
                System.out.println("The most common number of
children is 4 or more.");
            }
      }
}
```