

Assignment 3

1

- Write a program that prints odd numbers from 1 to n (n is a int parameter).

```
public static int printOddNumbers (int n) { ... }
```

2

- Write a program that generates the following output. (use loop)

```
public static void generateOutput() { ... }
```

```
1
22
333
4444
55555
666666
7777777
88888888
999999999
```

3

- Write a program that reads in one number and prints out all divisors (factors) of that number.

```
public static boolean isPrimeNumber(int n) { ... }
```

Eg.

Input: 42

Output: 1 2 3 6 7 14 21 42

4

- Write a function that approximates pi in n steps

```
public static boolean getPI(int n)
```

$$\pi = \sum_{k=0}^{\infty} \frac{1}{16^k} \left(\frac{4}{8k+1} - \frac{2}{8k+4} - \frac{1}{8k+5} - \frac{1}{8k+6} \right)$$

5

- Write a program that prints out all 3-digit numbers where the sum of digits is greater than 25. Expect: 899 989 998 999

```
public static void printSpecialNumbers()
```