

## Exercise 5

1. State the output of the program segment.

(a) 

```
for (int i = 0; i < 5; i++)
    System.out.println( i );
```

(b) 

```
for (int i = 5; i < 0; --i)
    System.out.println( i );
```

(c) 

```
for (int i = 5; i > 0; --i)
    System.out.print(i);
System.out.println( );
```

(d) 

```
for (int i = 5; i > 0; --i)
    System.out.print(i + "\t");
System.out.println( );
```

(e) 

```
int sum = 0;
for (int i = 2; i <= 5; ++i)
    sum += i;
System.out.println("sum = " + sum);
```

(f) 

```
int product = 1;
for (int i = -2; i < 1000; ++i)
    product *= i;
System.out.println("product = " + product);
```

2. Write a program to output 10 times the statement: "I Love Mocha Java".

Sample output: (1) I Love Mocha Java  
(2) I Love Mocha Java .....

3. Write a program to output the word "YOUTH".

(a) Display one letter at a time in one row. Letters are separated by blanks.  
(b) Display one letter per row.

4. Write a program to output the numbers from 80 to 100 inclusive in a row.

80 81 82 83 84 85 ..... 99 100

5. Write a program to output the even numbers between 10 and 30.

10 12 14 16 18 20 22 24 26 28 30

6. Write a program to output the arithmetic sequence: 10 6 2 -2 -6 -10.

7. Write a program to output the geometric sequence to 10 terms.

1 1/2 1/4 1/8 1/16 1/32 1/64 1/128 1/256 1/512

8. Write a program to output a list of alphabets from L to T.

L M N O P Q R S T

9. Write a program to output the list of alphabets:

d f h j l n p

10. Write a program with the input: 2468 and output the following pattern:

(a)	2	(b)	2468	(c)	8642	(d)	8
	24		246		864		6
	246		24		86		4
	2468		2		8		2