Exercise 1

Determine the output of the Java programs.

(a) 2	(b) 10 ****
(c) -9 -6 -3	

Exercise 2

(a) Syntax error (your corrected statement) :

```
int c=0, product =1;
while (c <= 5){
    product *= c;
    ++c;
}
```

Logic error (your explanation) :

The program fragment has missed the closing part of braces.

(b) Syntax error (your corrected statement) :

```
int x= 1, total =0;
while (x <= 10) {
    total += x;
    x++;
}
```

Better approach (your explanation) :

1. Since there are no multiple initializations in java, so the variable of the 'total' has to be declared as 0.

2. The repetition structures of 'while' has to be written as a lower case.

(c) Syntax error (your corrected statement) :

```
for (int x=100; x >= 1 ; x++)
System.out.println(x);
```

Logic error (your explanation) :

1. The repetition structures of 'for' has to be written as a lower case.

2. It has to use the semicolon between each condition of for-loop.

3. It's unnecessary for adding a semicolon after the condition.

Exercise 3

The value of variable x is 4.

Exercise 4

(a) 12 11 10 9 8	(b) 2 3 4 5

Exercise 5

```
1
4
9
16
25
Total is 55
```

Exercise 6

(a)
```java
public static void main(String[] args) {
    int i = -9;
    while (i <= -1) {
        System.out.println(i);
        i += 3;
    }
    System.out.println("After loop, i=" + i);
}
```

(b)
```java
public static void main(String[] args) {
    int i = 5;
    while (i >= 0) {
        System.out.println(i--);
    }
    System.out.println("After loop, i=" + i);
}
```