

Java Genesis Chapter 4

Quick Quiz

Question 1

What is printed in the Output window by each of the following Java fragments?

- (a)

```
int a = -2;
for (int i=1; i<=2; i++)
    if (a < 0) a = a + 2;
    else if (a == 0) a = a + 3;
    else a = a - 1;
System.out.print(a);
```
- (b)

```
int b = -2;
for (int i=1; i<=2; i++) {
    if (b < 0) b = b + 2;
    if (b == 0) b = b + 3;
    if (b > 0) b = b - 1;
}
System.out.print(b);
```
- (c)

```
int c = -2;
for (int i=1; i<=2; i++)
    if (c < 0) c = c + 2;
if (c == 0) c = c + 3;
if (c > 0) c = c - 1;
System.out.print(c);
```
- (d)

```
int d = -2;
for (int i=1; i<=2; i++)
    if (d < 0) {
        d = d + 2;
        if (d == 0) d = d + 3;
        else if (d > 0) d = d - 1;
    }
System.out.print(d);
```

Question 2

What is printed in the Output window by each of the following Java fragments?

- (a)

```
int a=0, x=3, y=5;
while (x!=y && x<=Math.max(x, y)) {
    if (x > y) x = x - 1;
    else y = y - 1;
    a++;
}
System.out.print(a+ " "+x+ " "+y);
```
- (b)

```
int b=0;
double d;
do {
    d = 2*Math.random() + 18;
    b = (b+2)%20;
} while (b != (int)d);
System.out.print(b);
```
- (c)

```
int p=3, q=2;
while (p%3 == 1 || q%3 != 1) {
    p = 2*q + 1;
    q = 2*p;
}
System.out.print(p+ " "+q);
```

Question 3

What is printed in the Output window by each of the following Java fragments?

- (a)

```
int a = 2;
switch (a*a) {
    case 0 : a = a + 1; break;
    case 2 : a = a + 2; break;
    case 4 : a = a + 3;
}
System.out.print(a);
```
- (b)

```
int b = 4;
switch (b) {
    case 1 : b = b + 1;
    case 4 : b = b + 2;
    case 2 :
    default : b = b + 3;
}
System.out.print(b);
```