

LOOPS

1. Determine the exact output for the following code segment:

```
for (int i=1; i<=10; i++)  
    System.out.println(i*i);
```

2. Determine the exact output for the following code segment:

```
char letter='R';  
System.out.print("MTV plays lots of ");  
for (int mtv=0; mtv<=2; mtv++)  
{  
    System.out.print(letter);  
    letter +=15;  
}
```

3. Which of the following will print the even numbers beginning with 2 and ending with 20 – there can be more than one solution:

- a.

```
for (int a=2; a<20; a+=2)  
    System.out.println(a);
```
- b.

```
for (int b=0; b<20; b+=2)  
    System.out.println(b+2);
```
- c.

```
for (int c=2; c<=20; c++)  
    System.out.println(c);
```
- d.

```
for (int d=1; d<=20; d++)  
    if (d%2 == 0)  
        System.out.println(d);
```

For exercises 4-8, determine the exact output for the following code segments. If an infinite loop exists, state “infinite loop” and give only the first three iterations.

4.

```
int k=0;  
for (int m= -2; m<=1; m++)  
{  
    k=k+m*2;  
    System.out.println(4*k);  
}
```

5.

```
for (int i=1; i<=7; i++)
{
    for (int j=i; j<=7; j++)
        System.out.print('$');
    System.out.println();
}
```
6.

```
for (int m=1; m<5; m++)
{
    for (int n=5; n<=20; n+=5)
        if ((m+n)%3 == 0)
            System.out.print(m + " plus " + n + " ");
    System.out.println();
}
```
7.

```
int a=1;
do
{
    System.out.println(a + " " + 15*a);
    a++;
} while (15/a != 3);
```
8.

```
int m=1;
do
{
    System.out.println(m + " " + (m-1));
    m+=2;
} while (m != 10);
```