

Review: "While" Loops & "For" Loops

Identify the output of the following "while" loops

```
1. int num = 2;
   while (num < 10)
   {
       System.out.print (num + "");
       num++;
   }
```

```
2. double num = 13.5;
   while (num >= 8)
   {
       System.out.print (num + " ");
       num--;
   }
```

```
3. double num = 16;
   while (num > 8)
   {
       if (num % 2 == 0)
       {
           num -= 1;
       }
   }
   System.out.print (num);
```

Identify the output of the following "for" loops

```
4. for (int value=7; value > 0; value--)
    {System.out.print (value);}
```

```
5. for (int value=1; value >= 20; value+=4)
    System.out.print (value);
```

```
6. for (int value=4; value < 24; value++)
    if (value%4 != 0)
        System.out.println (value);
```

Identifying Outputs of "Nested" Loops

Show the output produced by the following segments of code. Assume that all variables are declared as int.

```
7.  for (int k = 1; k <= 2; k++)
    for (int m = 1 ; m <= 3; m++)
        System.out.println(k + " " + m);
```

```
8.  for (int d = 6; d >= 4; d--)
    for (int e = 2; e <= 4; e++)
        System.out.println(d + " " + e);
```

```
9.  int x = 1;
    while (x <= 5)
    {
        sum = 0;
        y = 1;
        while (y <= x)
        {
            sum += 2;
            y++;
        }

        System.out.print(sum + " ");
        x++;
    }
```

```
10. for (i = 1 ; i <= 5 ; i++)
    {
        System.out.println(i);
        for (j = i ; j >= 1 ; j -= 2)
            System.out.println(j);
    }
```

CHALLENGE:

```
11. for (i = 1 ; i <= 3 ; i++)
    for (j = 1 ; j <= 3 ; j++)
    {
        for (k = i ; k <= j ; k++)
            System.out.println(i + j + k);
        System.out.println();
    }
```