For each problem below, write what the program would print to the window. You may find it useful to use a table to track the values of the variables in the programs.

1. public class Counter
   {
       public static void main(String[] args)
       {
           int count = 0;
           while(count < 5)
           {
               count = count + 1;
               System.out.println(count);
           }
       }
   }
public class ThatsOdd
{
    public static void main(String[] args)
    {
        int a = 255;

        while(a > 0)
        {
            System.out.println(a);
            a = a / 2;
        }
    }
}
public class BackAndForth {
    public static void main(String[] args) {
        int a = 0;
        int b = 8;

        while(b > 0) {
            if(a < 4) {
                a = a + b;
            } else {
                a = a - b;
            }
            b = b - 1;
            System.out.println(a);
        }
    }
}
4. public class LoopLoop
{
    public static void main(String[] args)
    {
        int x = 0;
        int y = 0;

        while(y < 3)
        {
            x = 0;
            while(x < 3)
            {
                System.out.println(x + "", " + y);
                x = x + 1;
            }
            y = y + 1;
        }
    }
}

5. Write a method (in Eclipse) that detects perfect numbers. A perfect number is the sum of its divisors.

6. Write a method (in Eclipse) that sums the digits of a number. Note that n % 10 is the last digit of n and n / 10 is just like n, but without its last digit.