

```
1  /* Problem 5--Unescaped Prisoners
2     The prisoners in cells that are perfect squares can escape.  The ones
3     in cells that are not perfect squares cannot escape. */
4
5  import java.util.*;
6  import java.io.*;
7
8  public class prob5 {
9
10     private static Scanner in;
11     private static PrintWriter out;
12     private static int cs;
13
14     public static void main (String[] args) throws Exception {
15
16         in = new Scanner (new File ("prob5.in"));
17         out = new PrintWriter ("prob5.out");
18         cs = 1;
19         int low, high;
20         while ((low = in.nextInt ()) <= (high = in.nextInt ()))
21             Process (low, high); //read and process data
22         in.close ();
23         out.close ();
24     }
25
26     /* Process just prints out the non-perfect squares in range */
27     public static void Process (int l, int h) throws Exception {
28
29         out.print ("Case "+(cs++)+"\r\n");
30         out.print ("The unescaped prisoners are in cells ");
31         for (int i=l; i <= h; i++)
32             if (Math.abs (Math.sqrt(i)-(int)Math.sqrt(i)) > 1e-5)
33                 out.print (i+" ");
34         out.print ("\r\n\r\n");
35     }
36 }
37
```