```java
import java.text.DecimalFormat;

public class Sieve {

    public static void main String[] args) {
        System.out.println("\nSieve of Eratosthenes\n");
        Scanner input = new Scanner System.in);
        System.out.print("Enter the primes upper bound ===>> ");
        final int MAX = input.nextInt();
        input.close();

        boolean[] primes = computePrimes(MAX);
        displayPrimes(primes);

    }

    public static boolean[] computePrimes(int upperBound) {
        // This method will compute the prime numbers
        boolean[] primeArray = new boolean[upperBound + 1];
        Arrays.fill(primeArray, true);

        primeArray[1] = false;

        for (int val = 2; val * val < upperBound; val++) {
            for (int i = 2; val * i <= upperBound; i++) {
                primeArray[val * i] = false;
            }
        }

        return primeArray;

    }

    public static void displayPrimes(boolean[] primeArray) {
        // This method will display the prime numbers

        int num = 0;

        String zeros = new String();

        for (int i = 0; i < (Integer.toString(primeArray.length -
1)).length(); i++) {
            zeros = zeros.concat("0");
        }
```

```
46
47          DecimalFormat df = new DecimalFormat(zeros);
48
49
50          for (int i = 1; i < primeArray.length; i++) {
51              if (primeArray[i] == true) {
52                  System.out.print(df.format(i) + " ");
53                  num++;
54
55                  if (num % 16 == 0) {
56                      System.out.print("\n");
57                  }
58              }
59          }
60
61      }
62  }
```