Implement the following methods.

1. `public static int[][] createMatrix(int width, int height)` which will create a width-by-height matrix of random ints.

2. `public static int[][] flip(int[][] M)` which takes a width-by-height matrix and returns its height-by-width reflection. For instance, if M is the matrix:

   1 3 4 2  
   3 2 1 1  

   `flip` will return the matrix:

   1 3  
   3 2  
   4 1  
   2 1  

3. `public static void printMatrix(int[][] M)` which will print M.

4. Implement the Sieve of Erastothenes algorithm to identify primes:

   Write down the numbers 1 2 3 4 5 ... n
   Strike out the multiples of \( p_1 = 2 \) (4, 6, etc.)
   Strike out the multiples of \( p_2 = 3 \) (6, 9, etc.)
   Strike out the multiples of \( p_3 = 5 \) (10, 15, etc.)
   Strike out the multiples of \( p_4 = 7 \) (14, 21, etc.)
   In general, at step \( i \), strike out the multiples of \( p_i \), which is equal to the smallest number greater than \( p_{i-1} \) that you did not yet strike out.
   etc.
   Only the prime numbers remain.