Assignment 1

Out: June 26, 1999
Due: July 3, 1999

1 The Sieve of Eratosthenes

The *sieve of Eratosthenes* extracts primes from a range of numbers. See
`http://www.vex.net/~trebla/numbertheory/primality_0.html`
for an exposition. (Yes, there is even a Java applet with source code. No, the source code does not really help you here haha.)

With the sieve of Eratosthenes (i.e., an array), find and output all primes from 1 to n, where n is an integer given in the input.
Sample input:

```
10
```

Sample output:

```
2
3
5
7
```

2 Queue of Integers

Write a class called `IntQueue` of queues of integers. It must provide the following methods:

- default constructor `IntQueue()` creates an empty queue
- constructor `IntQueue(int[] A)`creates a queue with elements from `A`, with `A[0]` being the head and so on
- `void queue(int x)` appends `x` to the queue
- `int peek()` returns the head of the queue without removing it
- `int unqueue()` returns the head of the queue and removes it