Given a stream of integers and a window size, calculate the moving average of all integers in the sliding window.

For example,

MovingAverage m = new MovingAverage(3);

m.next(1) = 1

m.next(10) = (1 + 10) / 2

m.next(3) = (1 + 10 + 3) / 3

m.next(5) = (10 + 3 + 5) / 3

**Solution:** The main solution is to have a buffer which stores the numbers. This buffer is of length equal to the size of the given moving window. This buffer is treated as circular buffer. The Idea is : Store a running sum when a new element is inserted. Also, when a new element is inserted, we replace an element (in FIFO order) from the circular buffer to make room for the new element. Now, we update the sum by subtracting the old element from and then adding the new element (basically sum+= new element – old element).