# The Algorithm Design Canvas

Problem name: Left rotation

## Constraints

* a -> array, n-> length of array, d -> num of rotations
* $1 <= n <= 10^5$
* $1 <= d <= n$
* $1 <= a[i] <= 10^6$

## Ideas

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|---|---|
| * verify inputs constraints, returns [] if not valid<br>* loop for i = 0 to i < d<br>* a = a.push(a.shift()) -> queue | O(n) |
| | O(n) |
| | |
| | |

## Test Cases

* basic tests with short and random arrays
* check all border cases and constraints
* check with array length $10^5$

## Code