This is the partial-sums problem.
1. Binary Indexed Tree. $O(n \log n)$.
2. $O(1 + \frac{\log n}{\log(w/\delta)})$ [1], where the elements of the array can be changed additively by $\delta$-bit integers.
lower bound: $\Omega(n \log n)$ in the cell-probe model [1, 2].

# References


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