

Decompose given array into small chunks

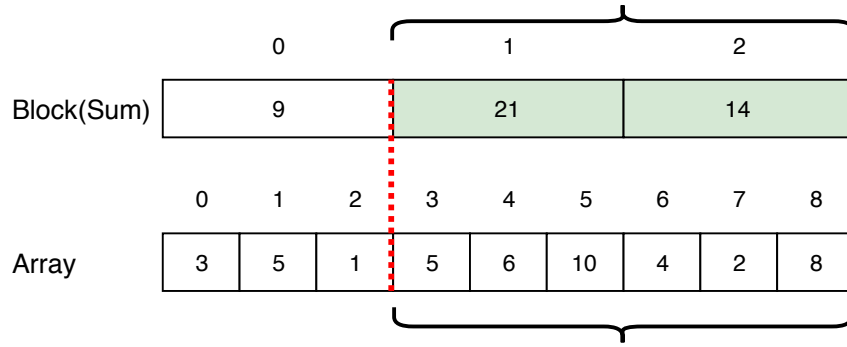
	0			1			2		
Block(Sum)	9			21			14		
	0	1	2	3	4	5	6	7	8
Array	3	5	1	5	6	10	4	2	8

Update Array

	0			1			2		
Block(Sum)	15			21			14		
	0	1	2	3	4	5	6	7	8
Array	3	5	7	5	6	10	4	2	8

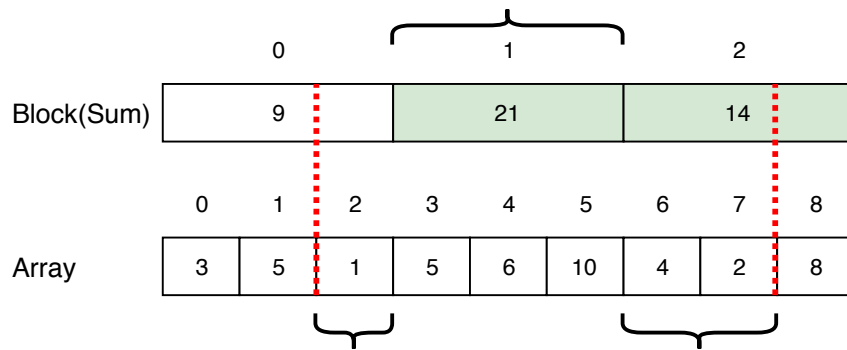
Update(2, 7) : Array[2] = 7, Block[0] = 15

Query 1: Range is on block boundaries



$$\text{Query}(3, 8) = \text{Block}[1] + \text{Block}[2] = 35$$

Query 2: Range crosses blocks



$$\text{Query}(2, 7) = \text{Array}[2] + \text{Block}[1] + \text{Array}[6] + \text{Array}[7] = 28$$