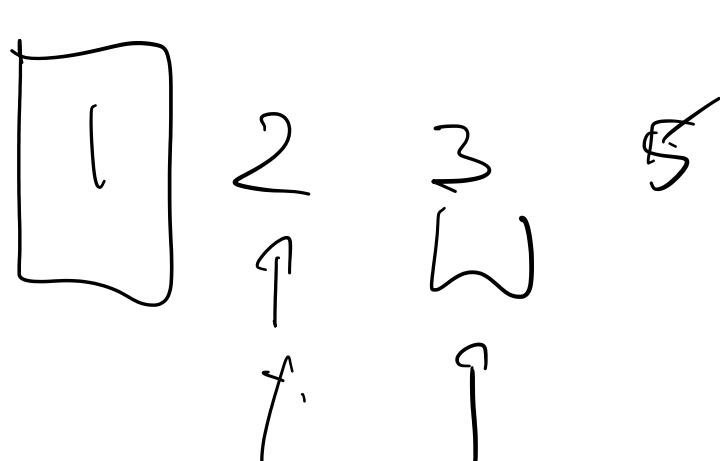
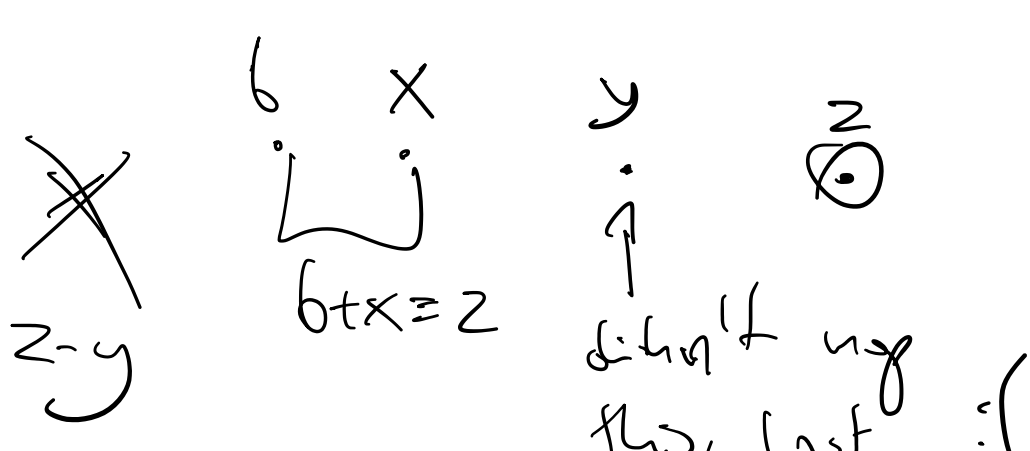
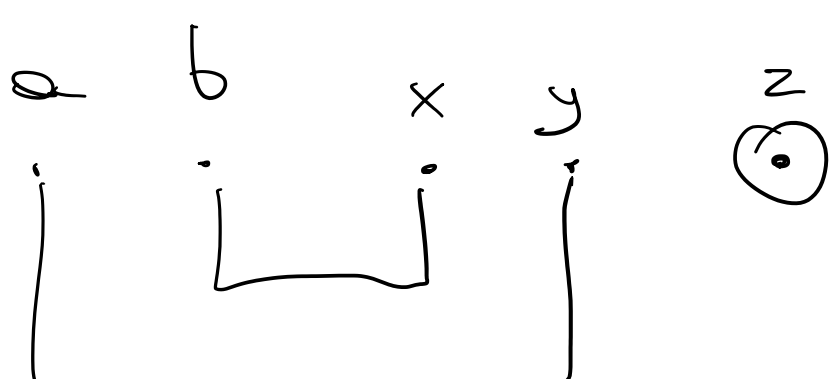
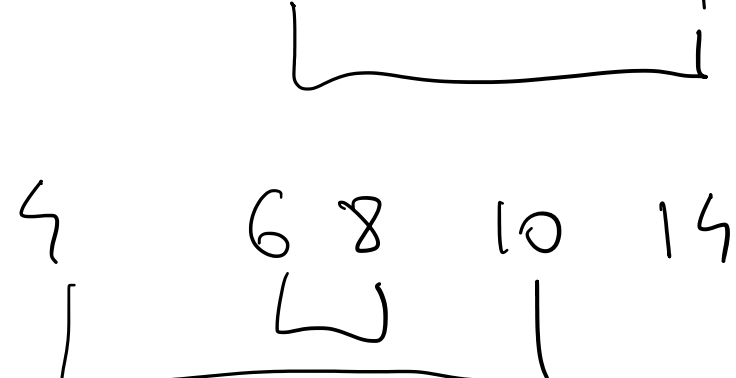


$O(n^2)$



$a_1, \dots, a_n$



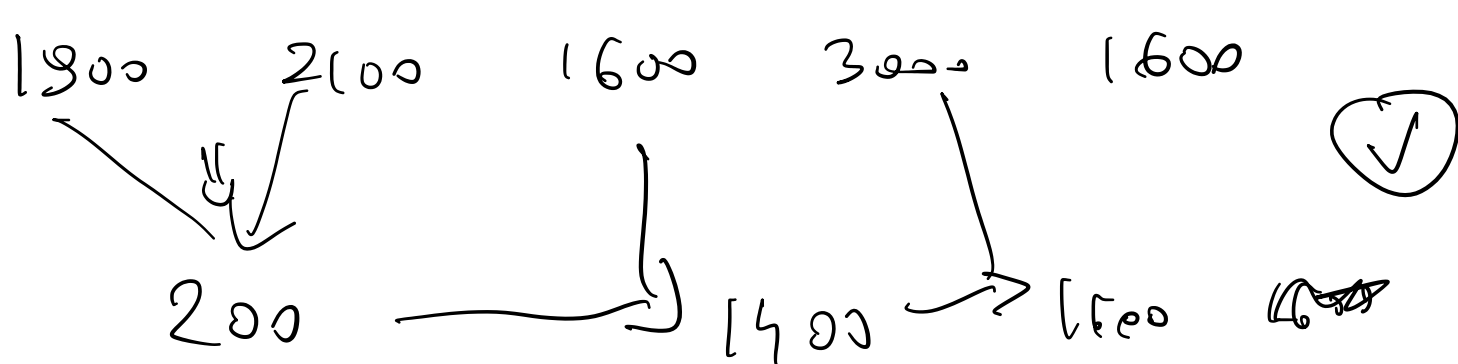
1 2 1

1 2 1  
↘  
1 1

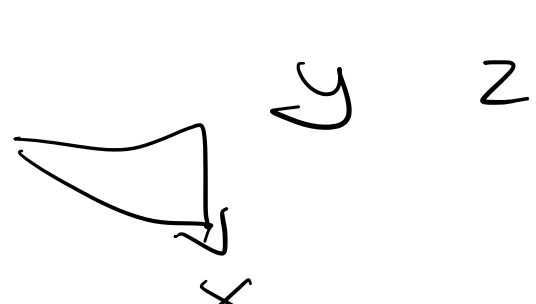
1 1 2  
└─┘

2 2 2 1 3  
o o

2 2 2 3 1



2000 1800  
↖ ↗  
y < z



no swap y-x z  $\Rightarrow z - (y-x) = z - y + x$   
swap z-x y  $\Rightarrow y - (z-x) = y - z + x$

200  
2000 1800 1600 3000 1600  
-200 1800 1200 400



1 1 2 1 1 2  
o to 2

2

1 1 2  
o 2

1 2 4 8  
└─┘ └─┘  
1 3 5

2 1 4 8

-1