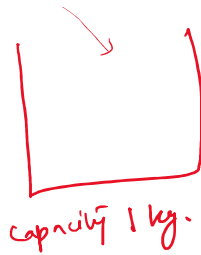


0-1 Knapsack -
Item 1 Item 2 Item 3 Item 4.
↓

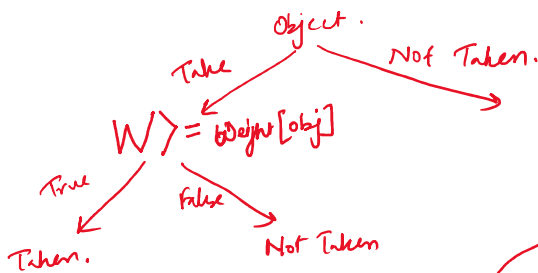
Fractional Knapsack.

Fractional Knapsack

Pumpkin = 2kg.



0-1 Knapsack problem



No of items (i)

Knapsack Remaining Capacity (j)

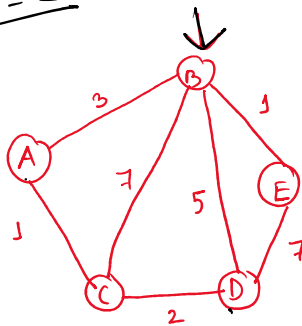
	0	1	2	3	4	5	6
0							
1							
2				•			
3							

j kg. $j - wt[obj]$
 $wt[item] \rightarrow kg.$

obj1, obj2, obj3. Not Taken.

$$m[i, j] = \begin{cases} m[i-1, j] \\ m[i-1, j - wt[i]] + profit[i] \end{cases} \quad \text{Max}$$

Source = C



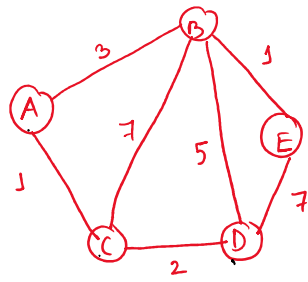
Parent array -

C	A	-1	C	B
A	B	C	D	E

Selected Node	Distance of source from node				
	A	B	C	D	E
	∞	∞	0	∞	∞
C	1	7		2	∞
⇒ A		4		2	∞
D		4			$2+7=9$
B					$4+1=5$

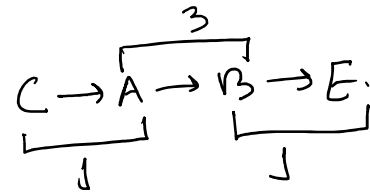


find Route to go from source to E.



find Route to go from source to E.

$E \leftarrow B \leftarrow A \leftarrow C$ (src).



= 5

Parent array -

C	A	-1	C	B
A	B	C	D	E