

Ex:

$W = 5$

$V_1 = 6 \quad w_1 = 2$

$V_2 = 5 \quad w_2 = 1$

$V_3 = 8 \quad w_3 = 3$

$V_4 = 7 \quad w_4 = 4$

		0	5	6	11	13	14
4	0	5	6	11	13	14	
3	0	5	6	11	13	14	
2	0	5	6	11	11	11	
1	0	0	6	6	6	6	
0	0	0	0	0	0	0	
		0	1	2	3	4	5

r

i

 $V[i, r]$

Arrows point where you should look for previous optimal values

• Runtime to fill array: $O(nW)$

• For next part of algorithm, need to work backwards through array, so need to prove all values in array are correct. \Rightarrow Good loop invariant says all values up to current value are correct.