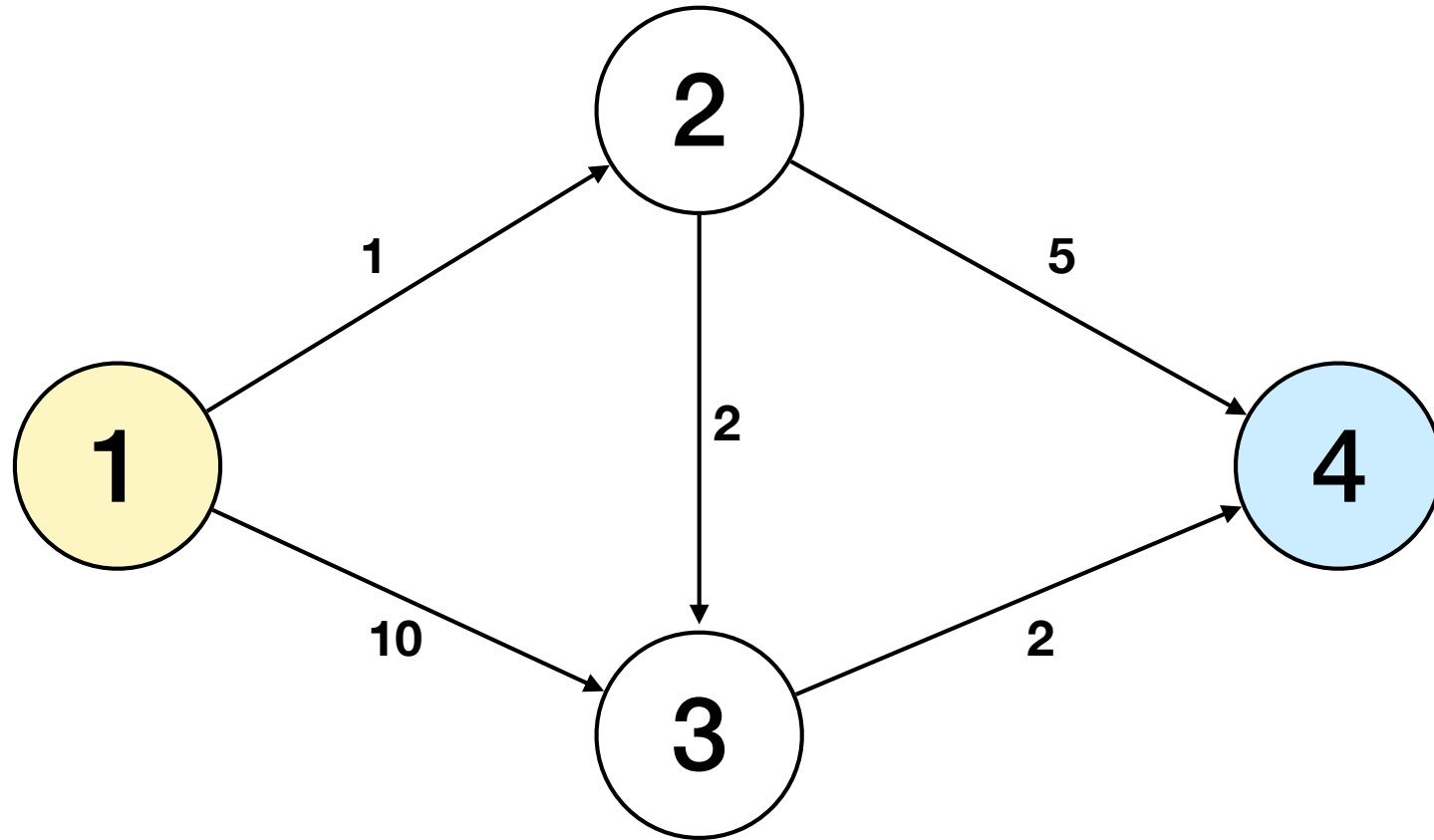


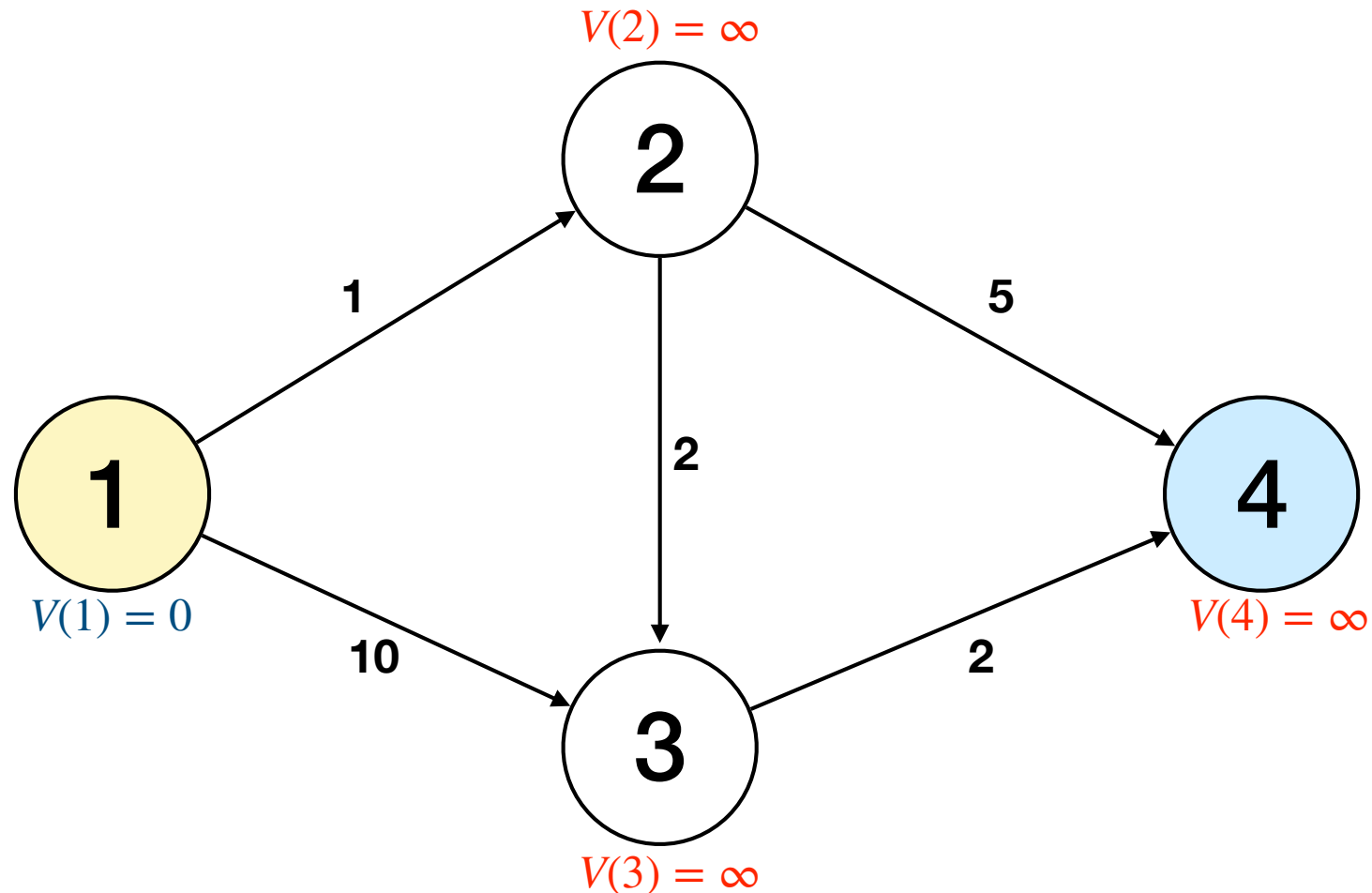
Forward shortest path

Find the minimum cost

original diagram

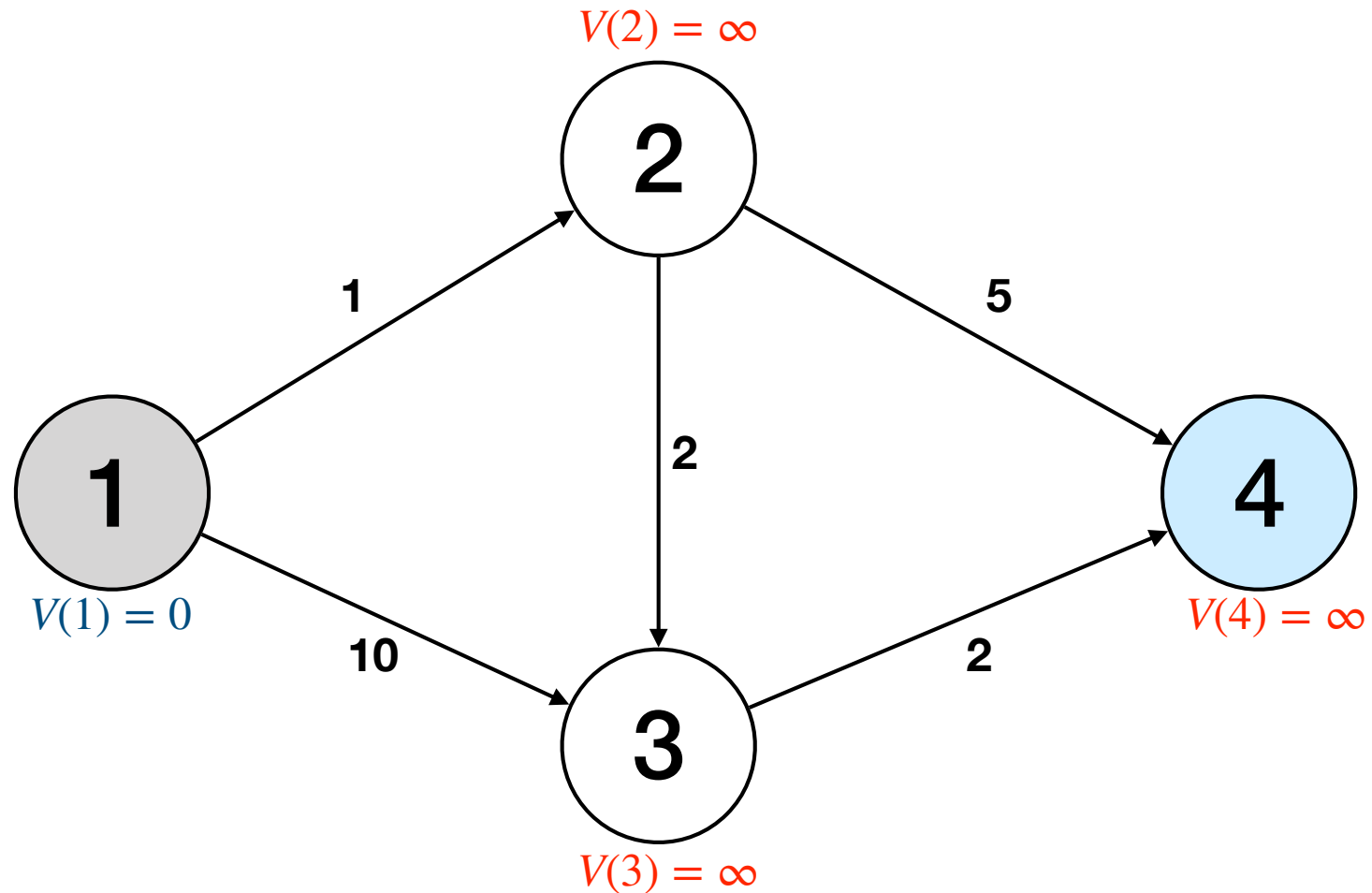


Define $V(i)$ – the minimum cost from the node 1 to node i

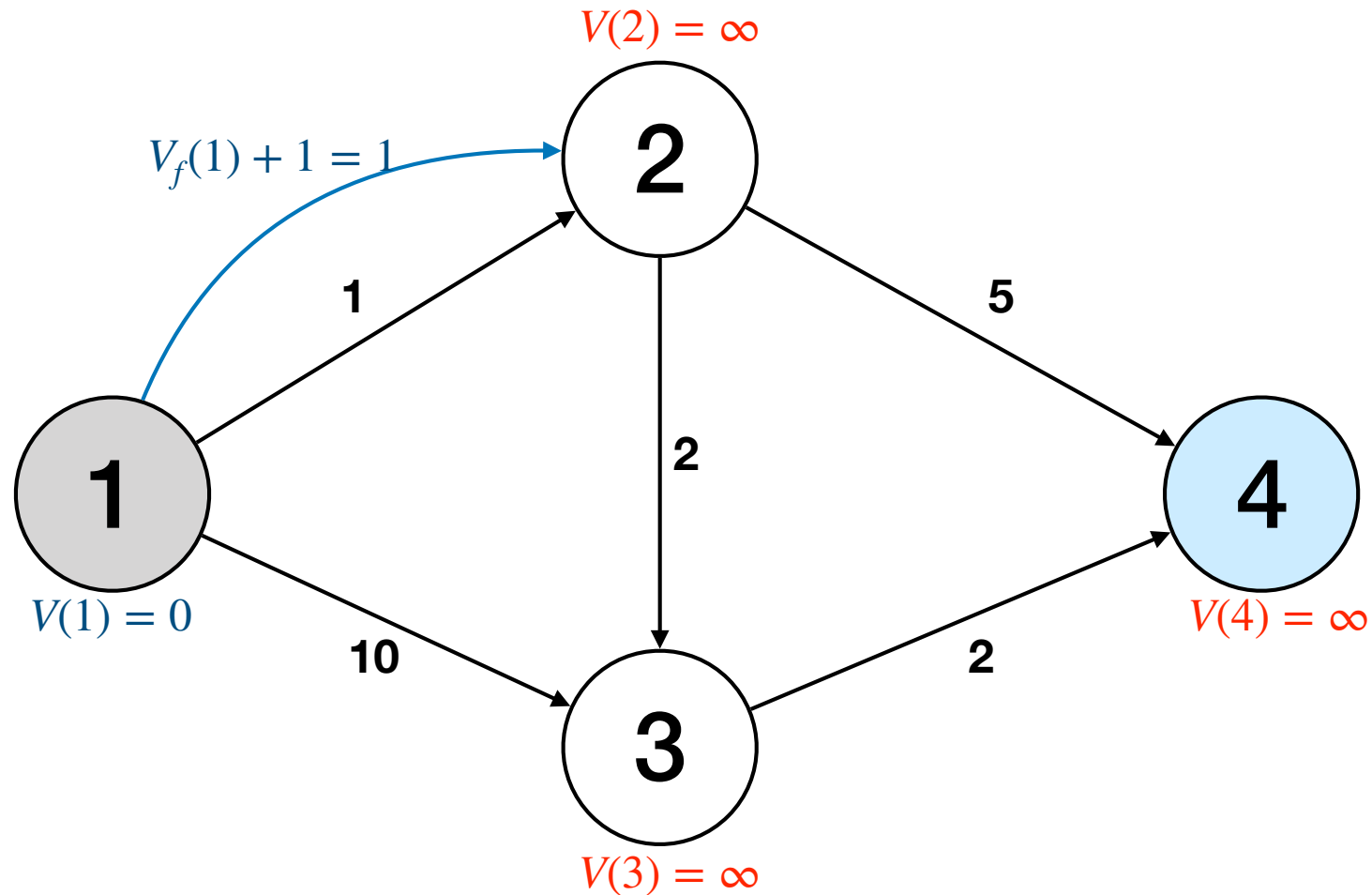


GOAL: find $V(4)$

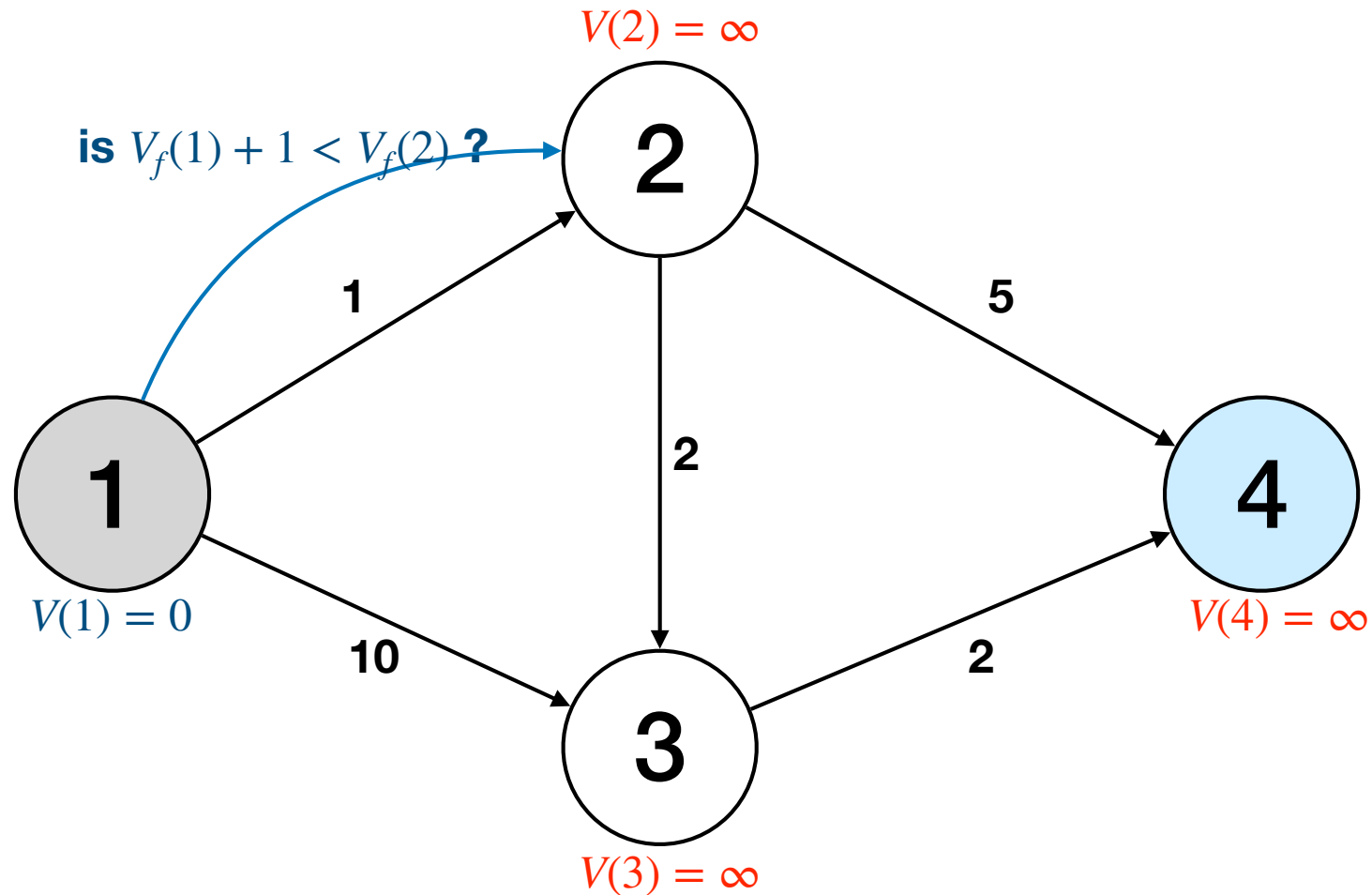
start from node 1 (i=1)



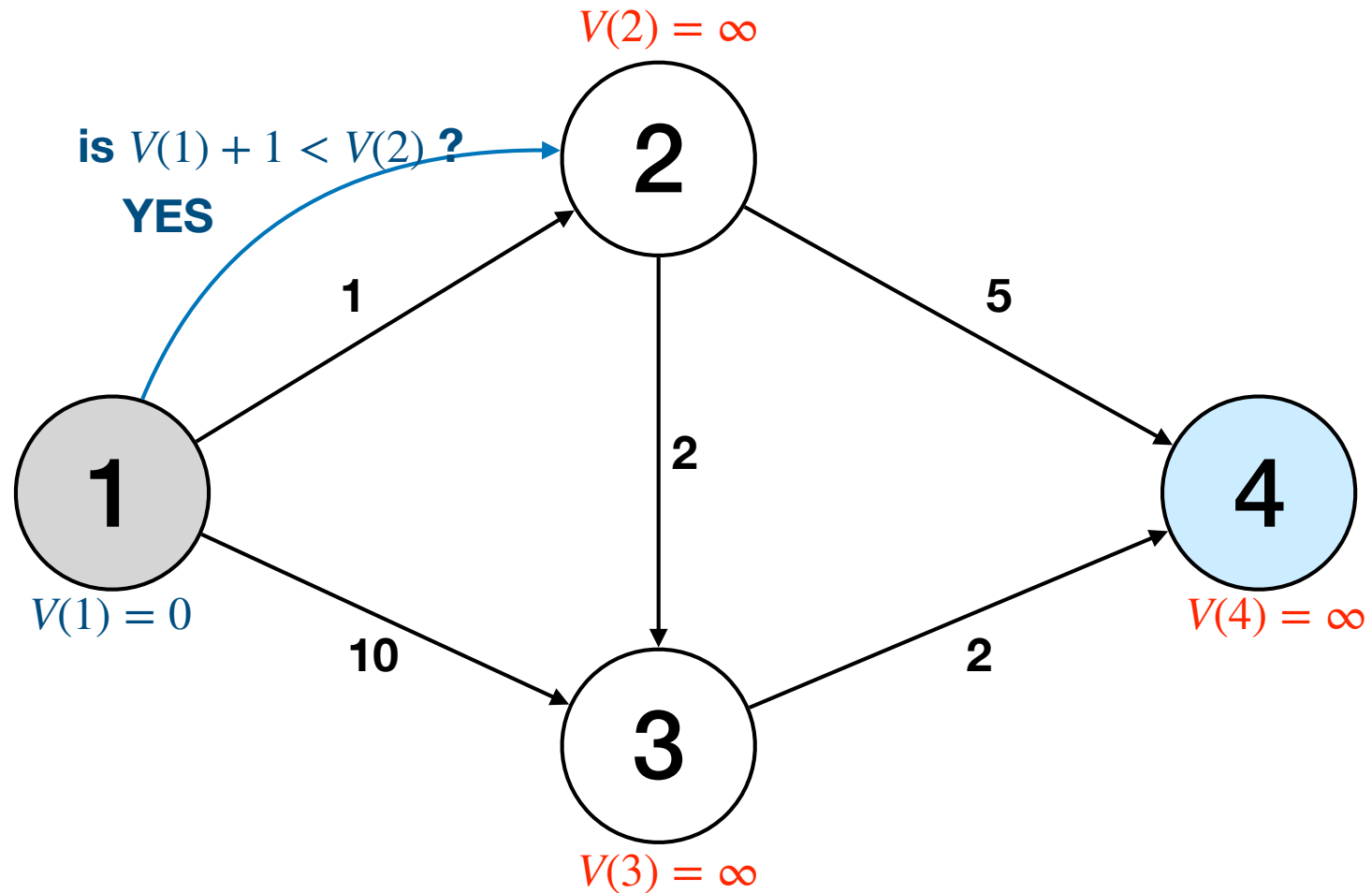
Try path from node 1 to 2 ($j=2$)



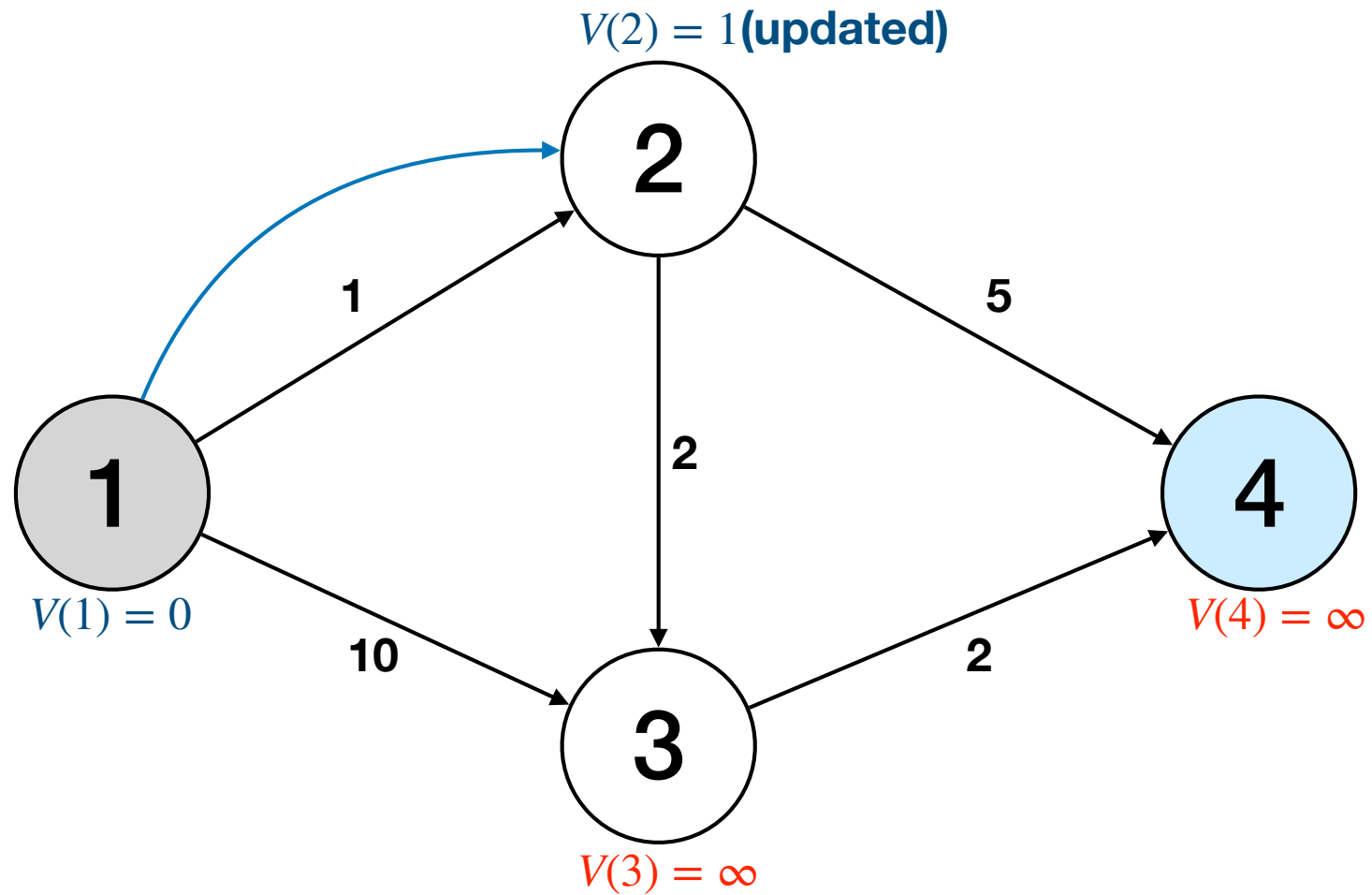
Try path from node 1 to 2 ($j=2$)



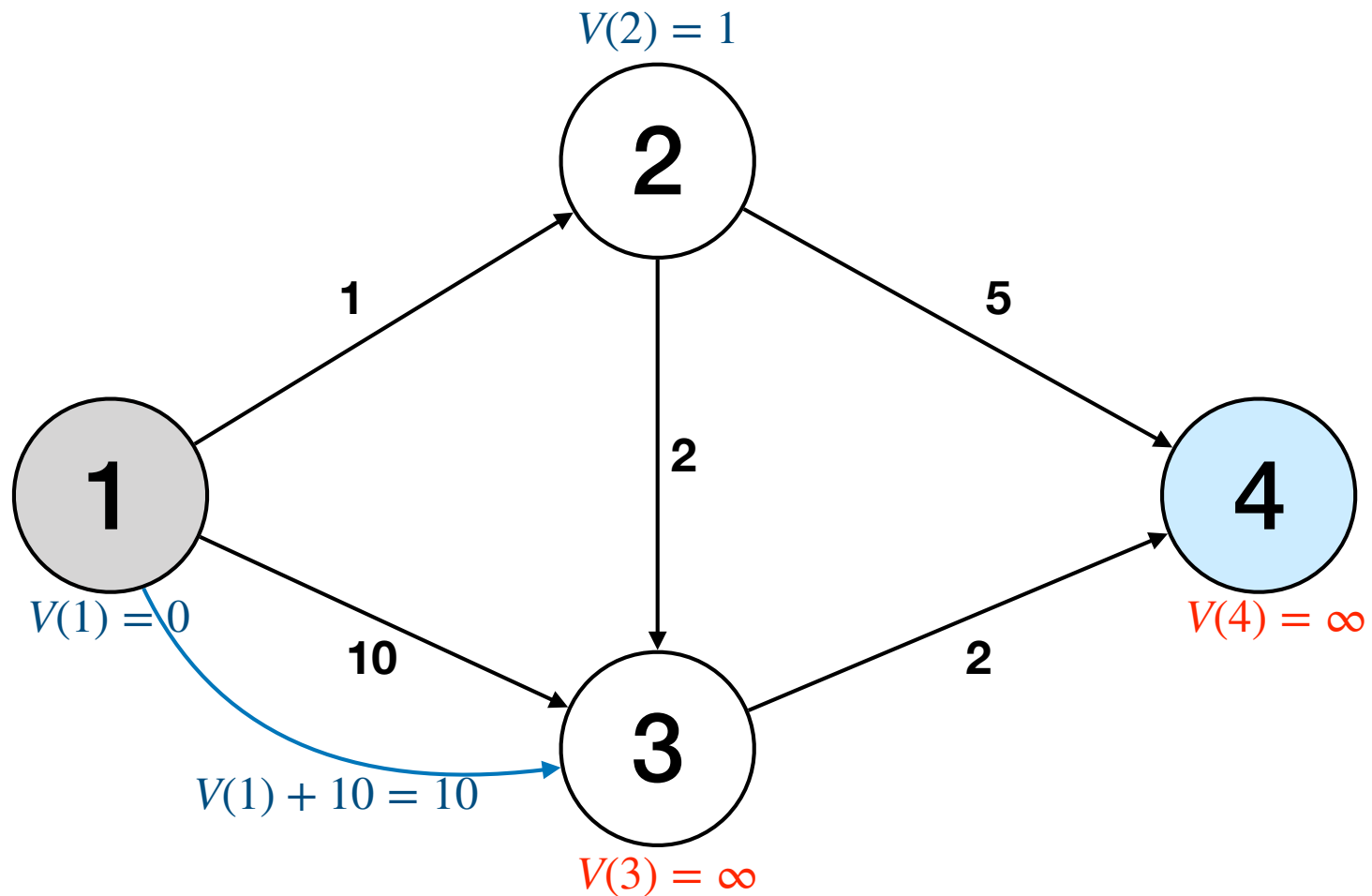
Try path from node 1 to 2 ($j=2$)



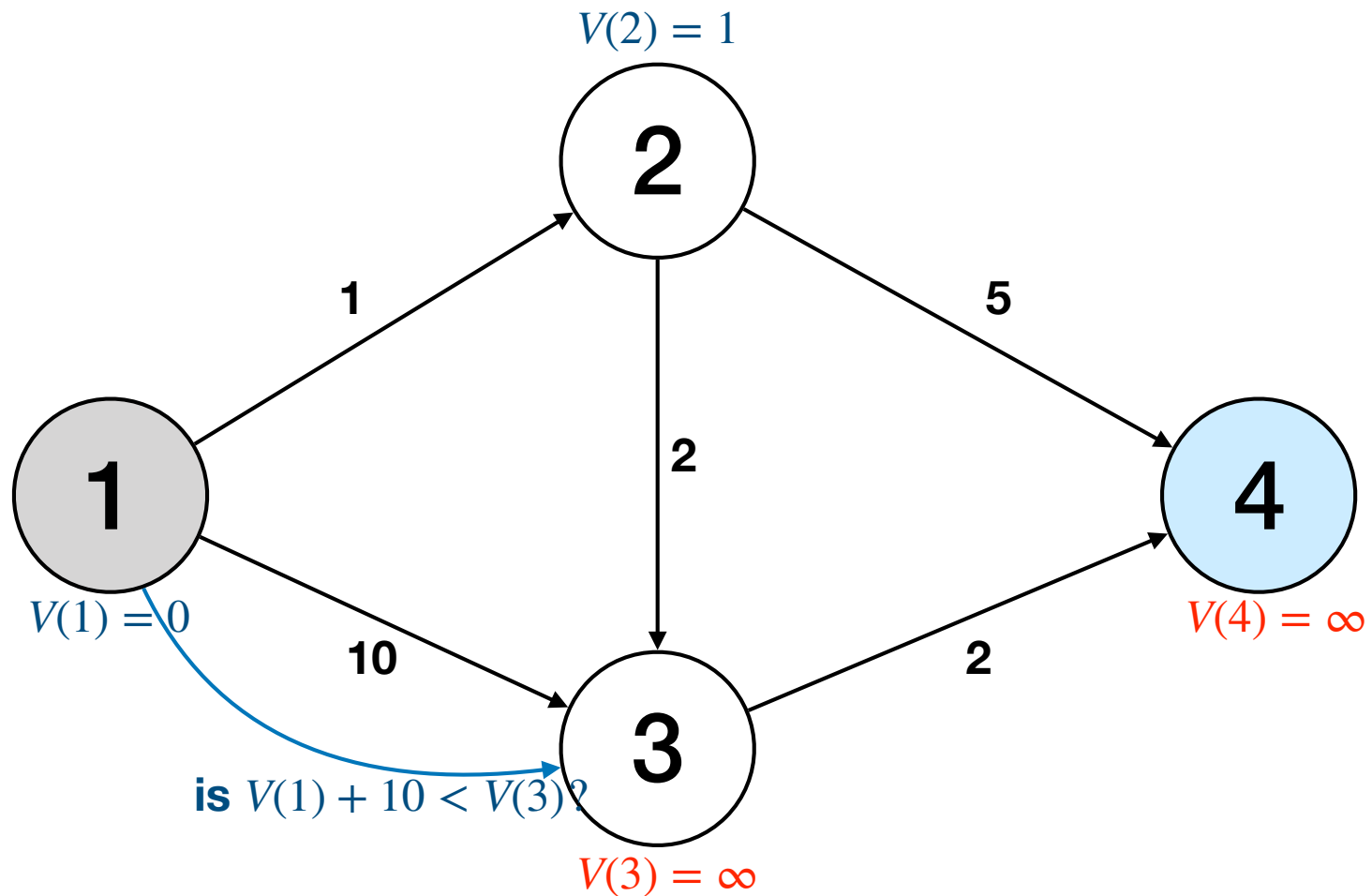
update $V(2)$



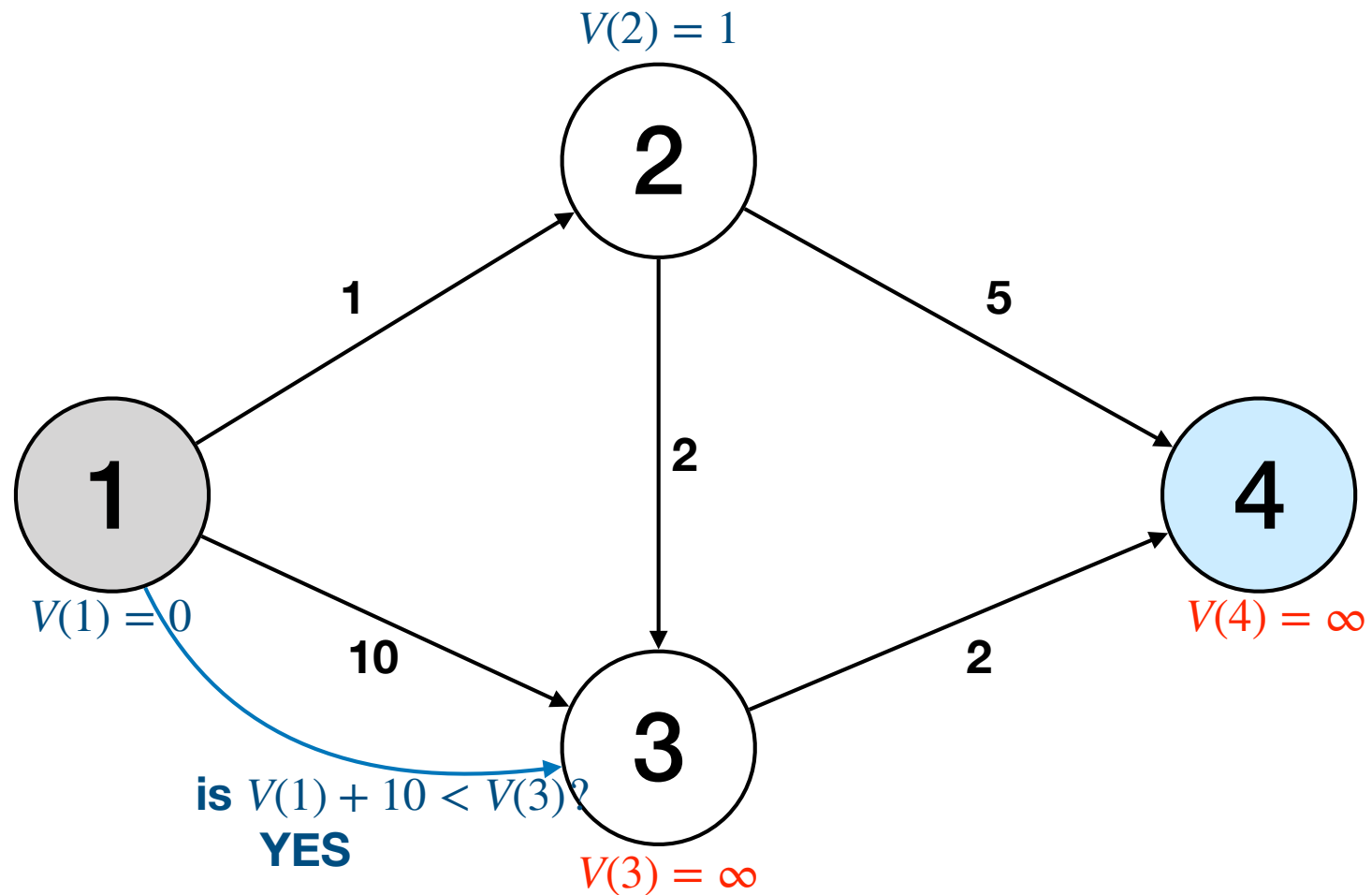
Try path from node 1 to 3 ($j=3$)



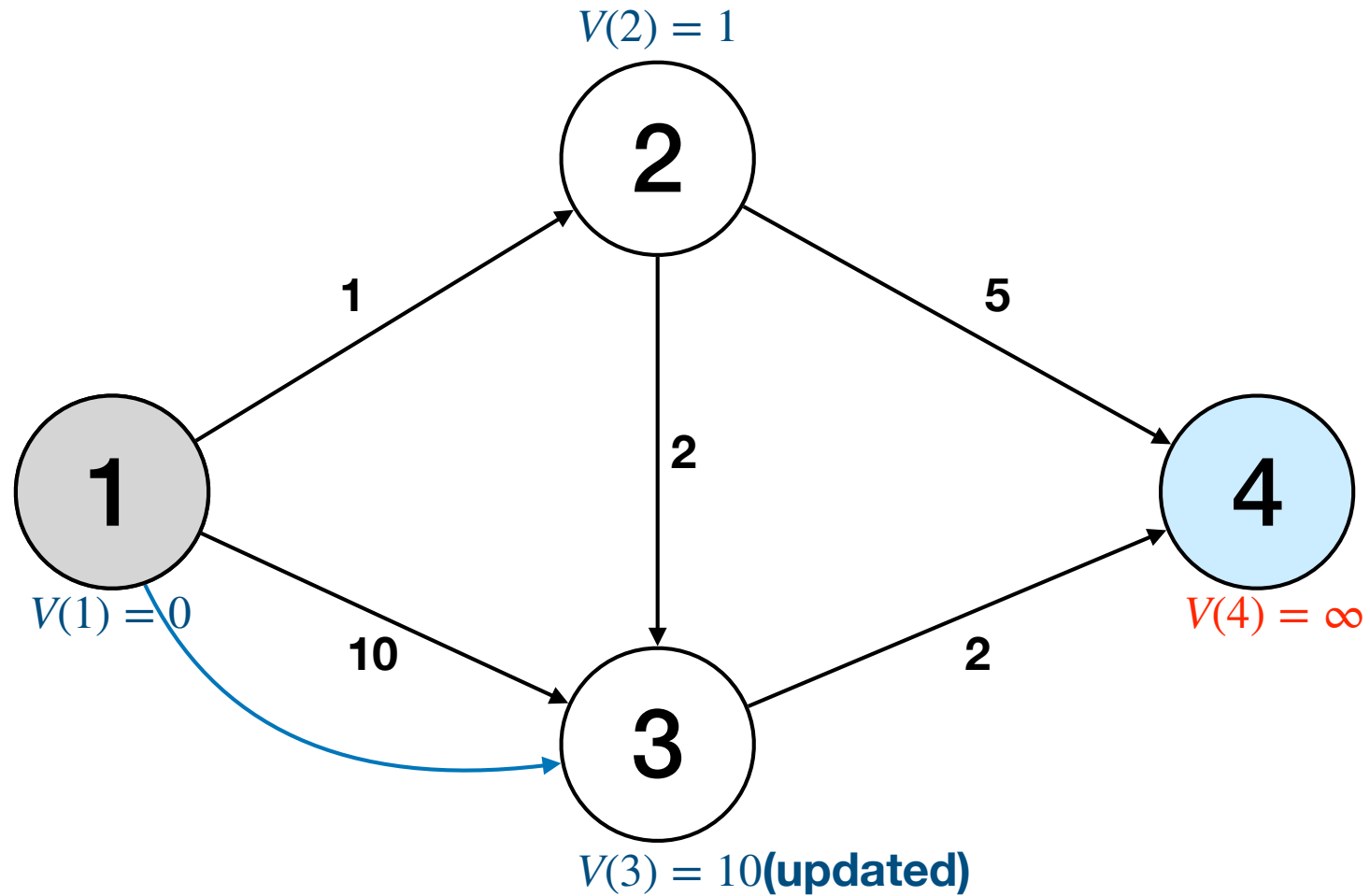
Try path from node 1 to 3 ($j=3$)



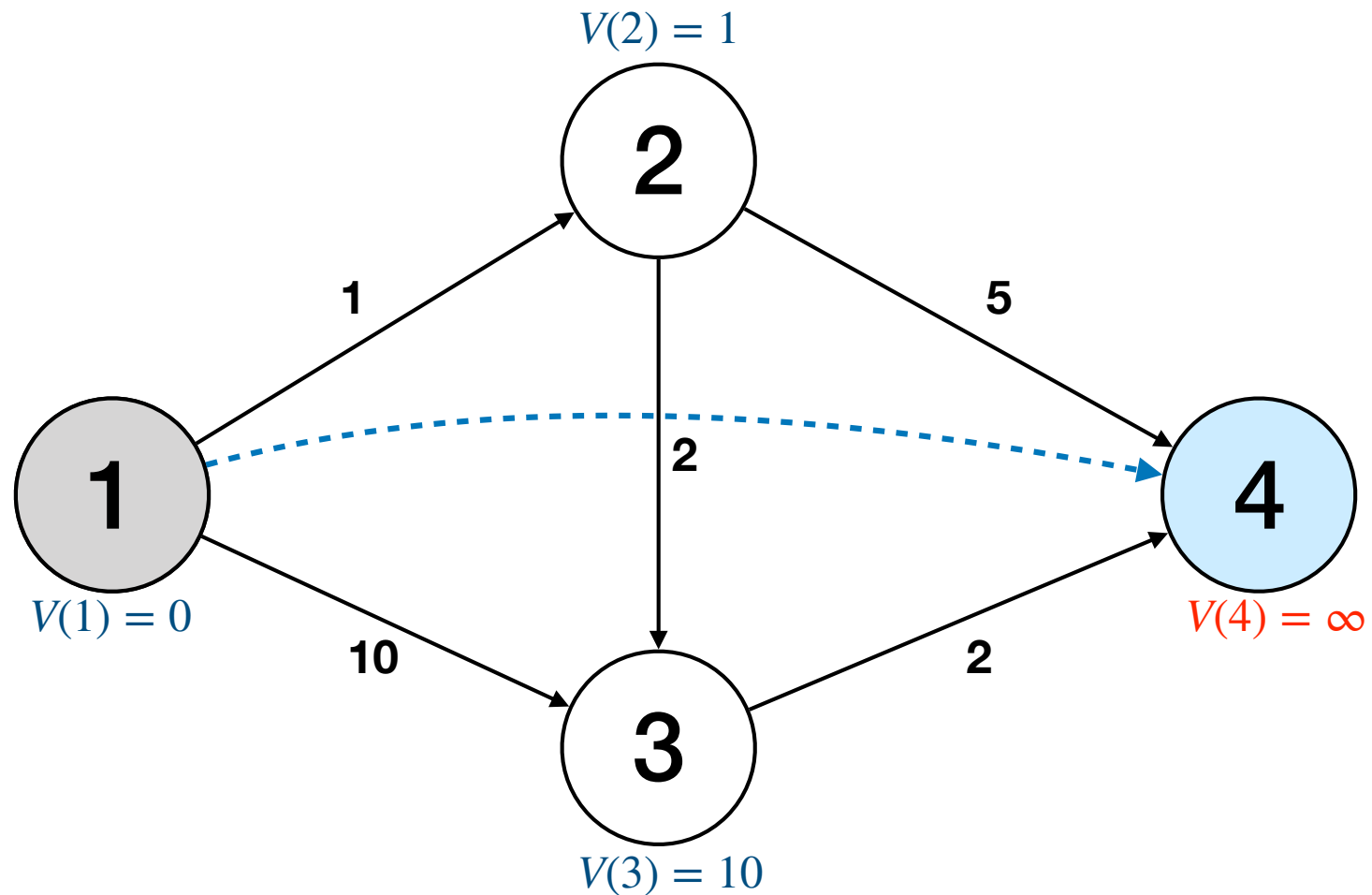
Try path from node 1 to 3 ($j=3$)



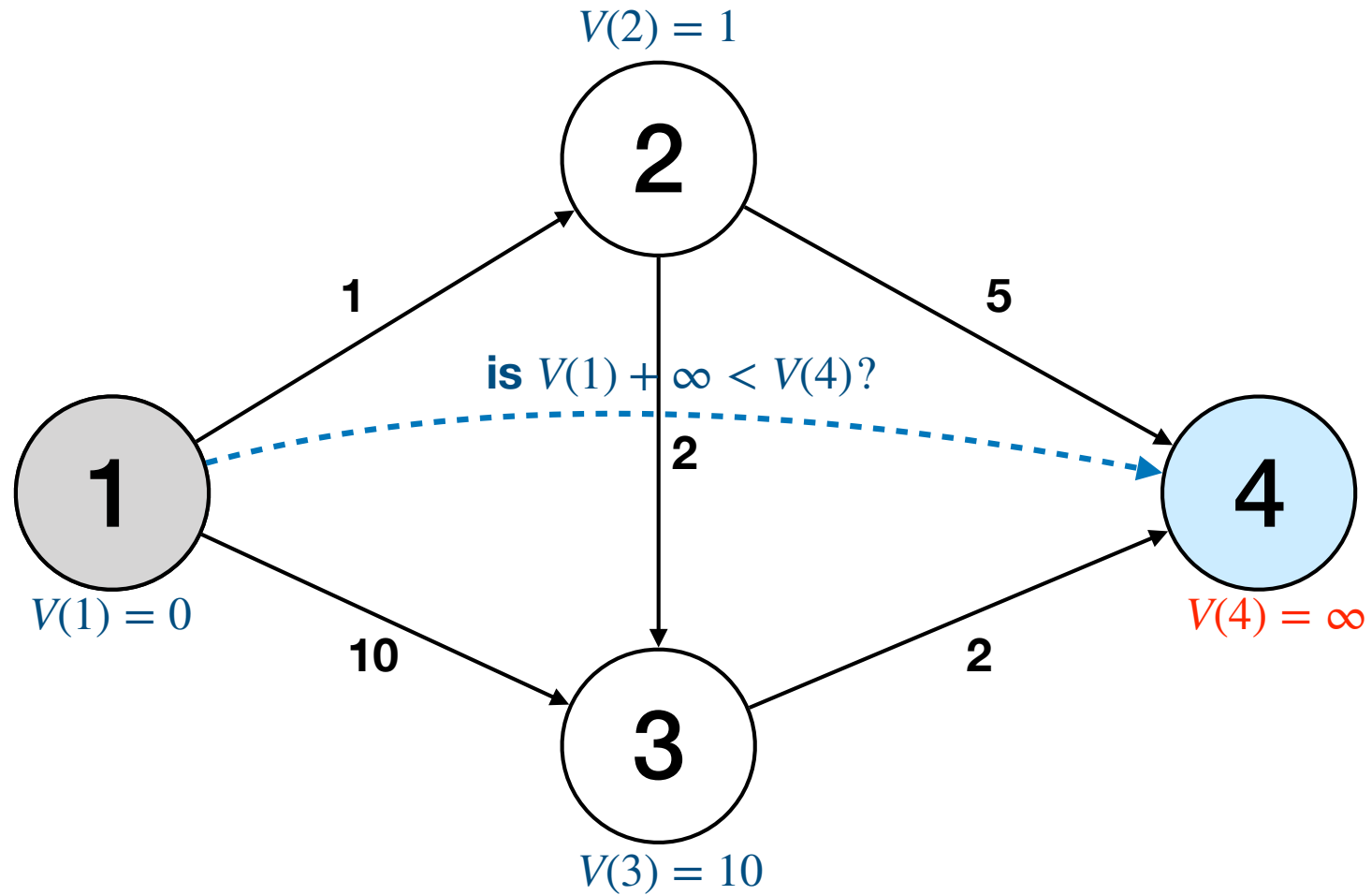
update $V(3)$



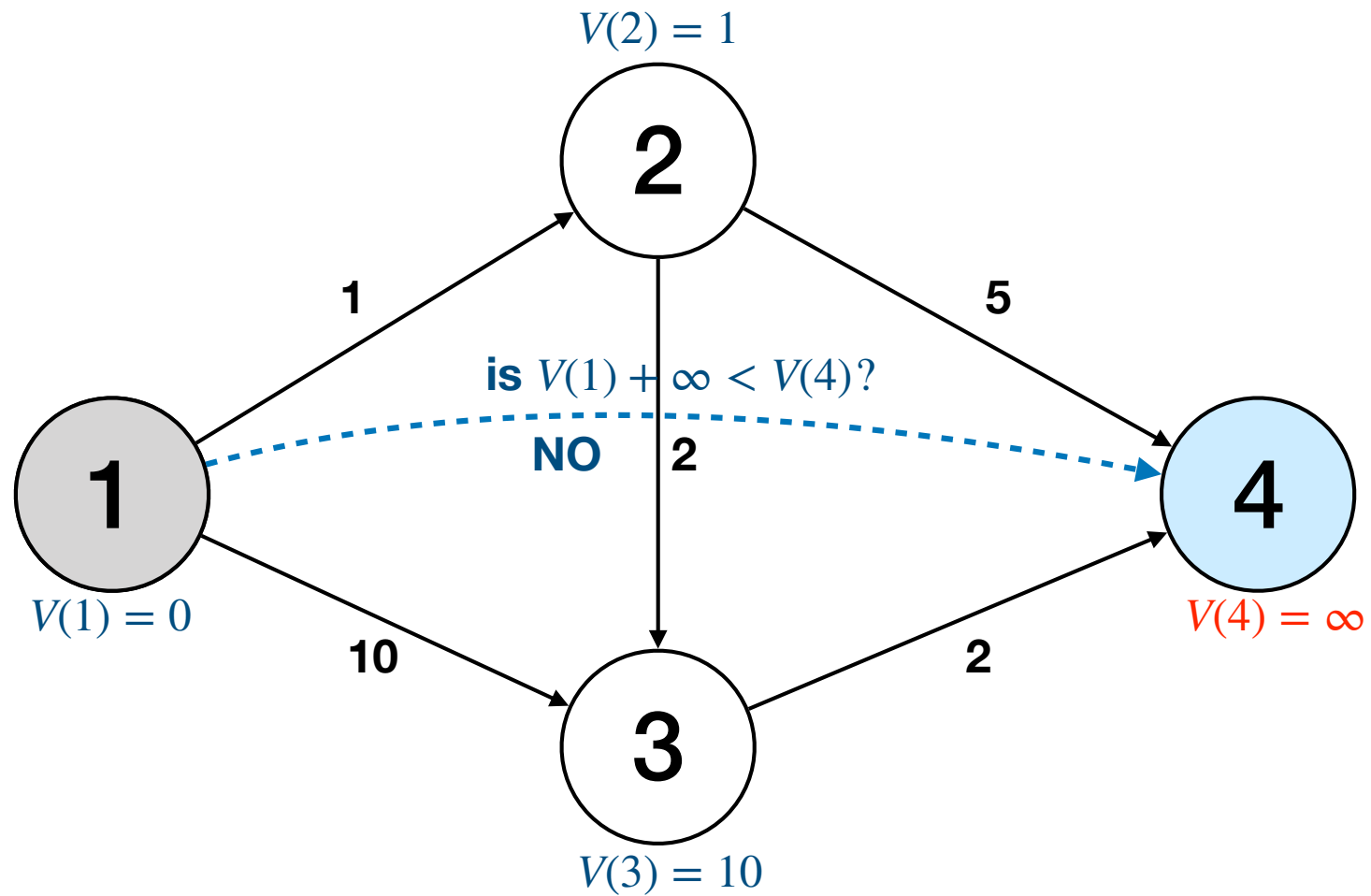
Try path from node 1 to 4 ($j=4$)



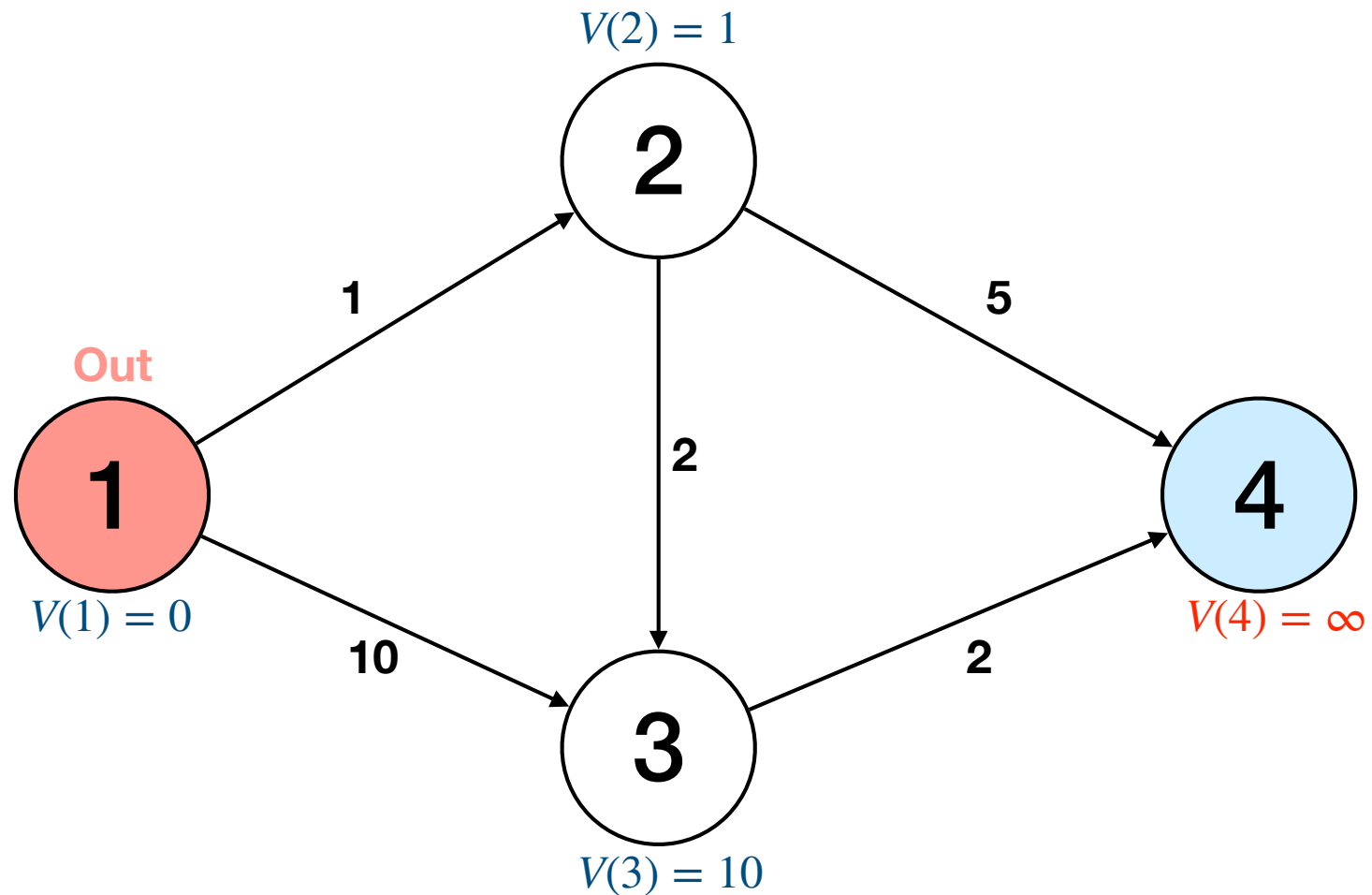
update $V(4)$



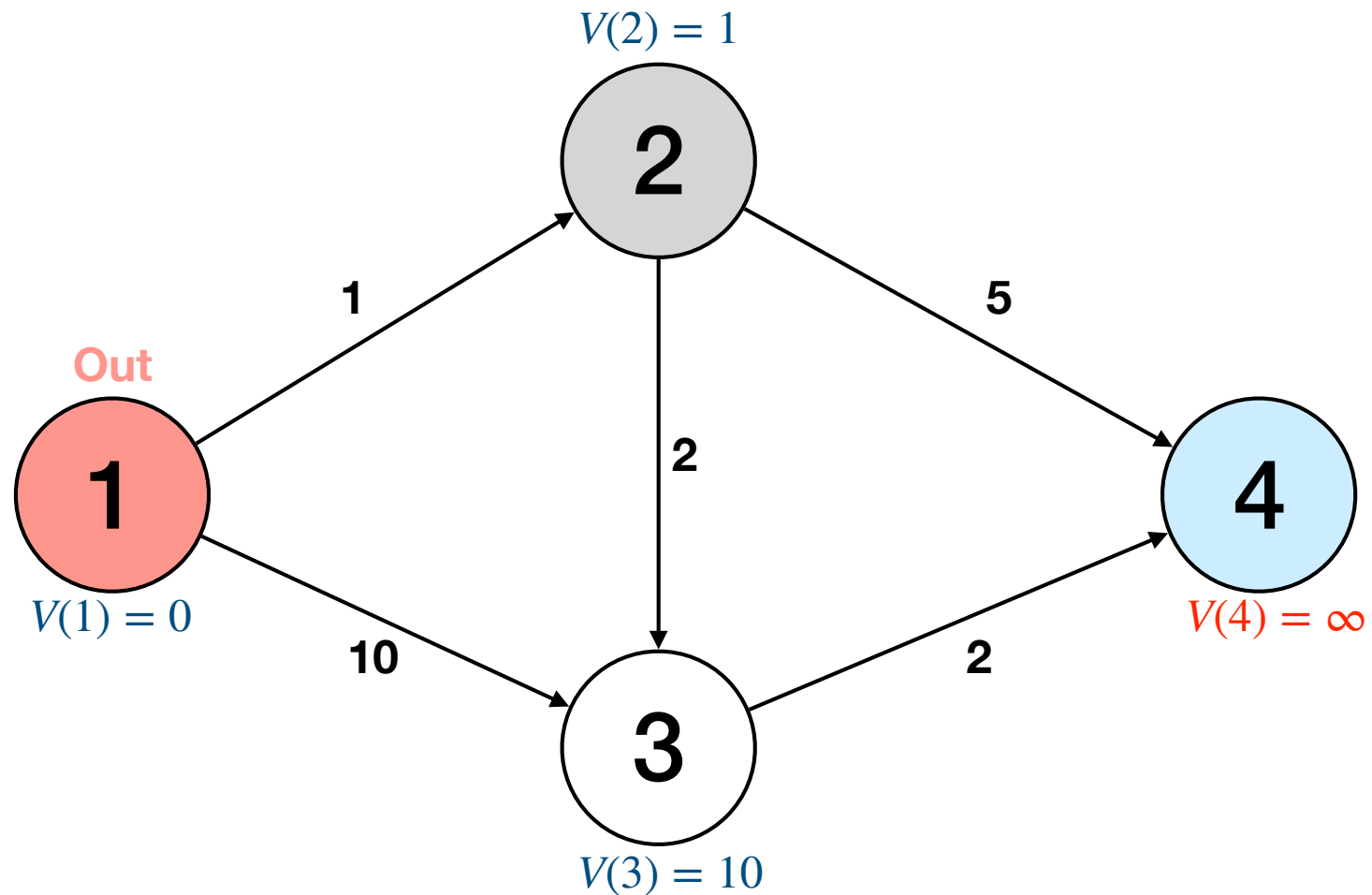
update $V(4)$



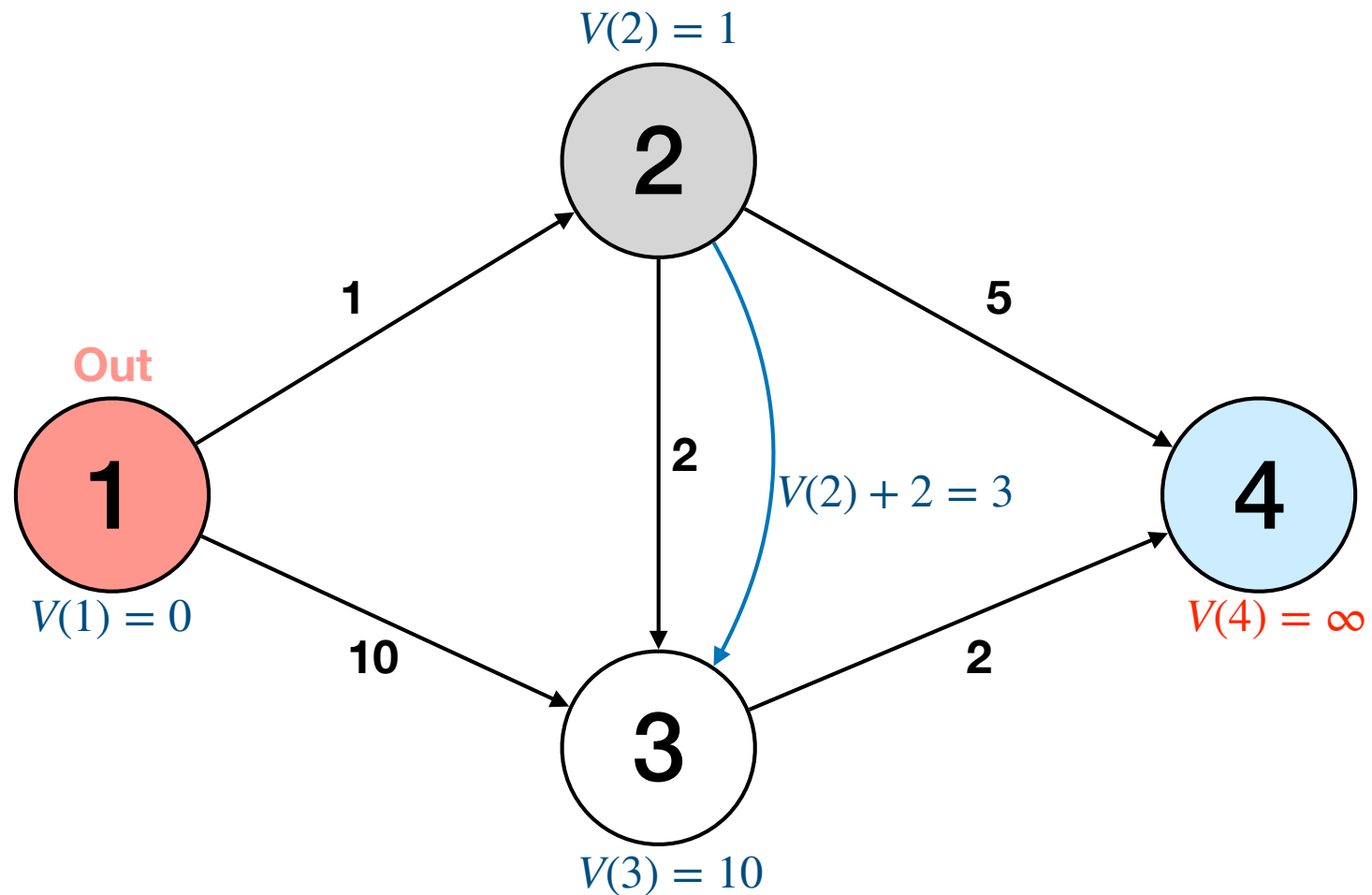
done with node 1



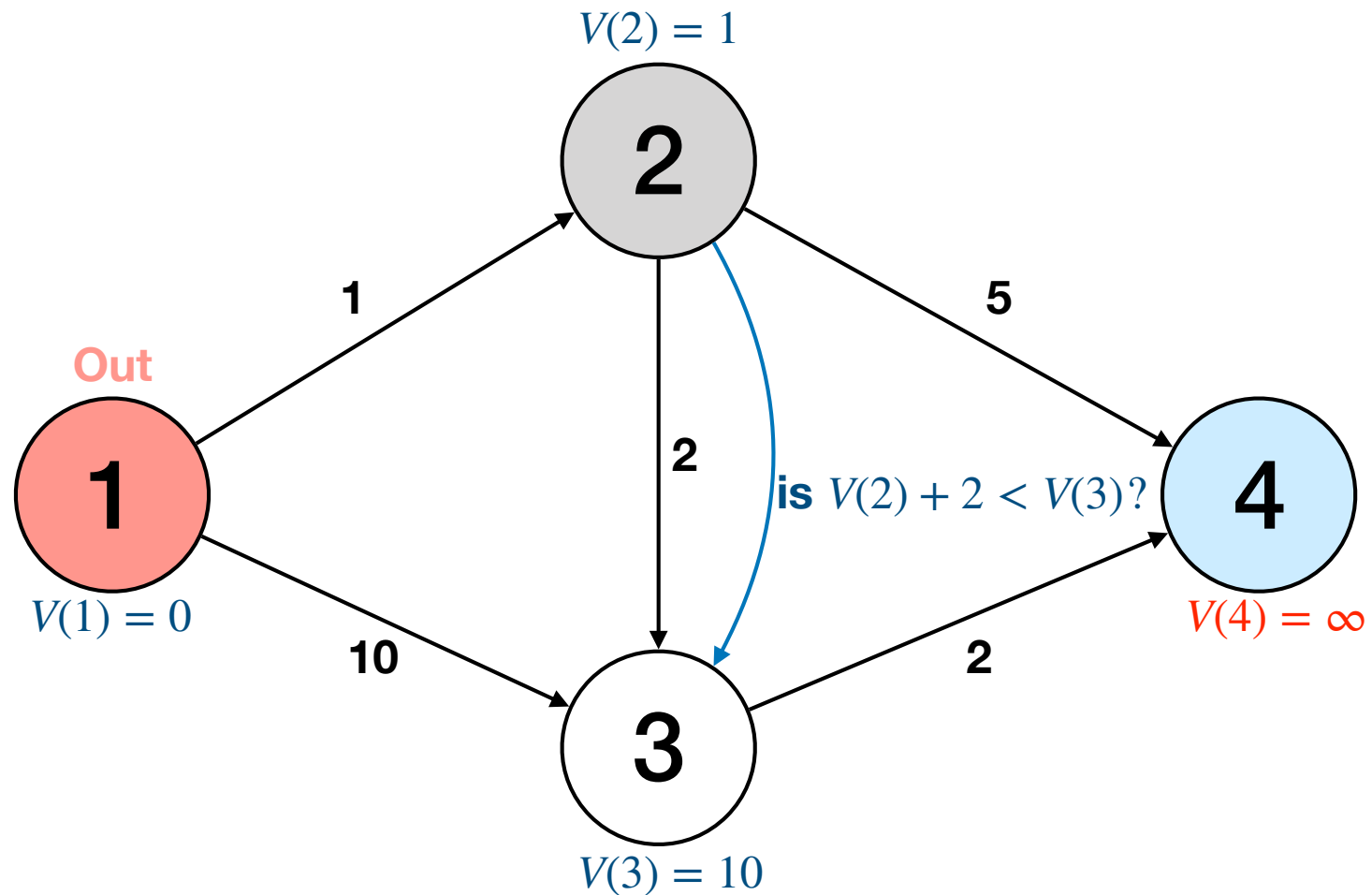
go to node 2 ($i=2$)



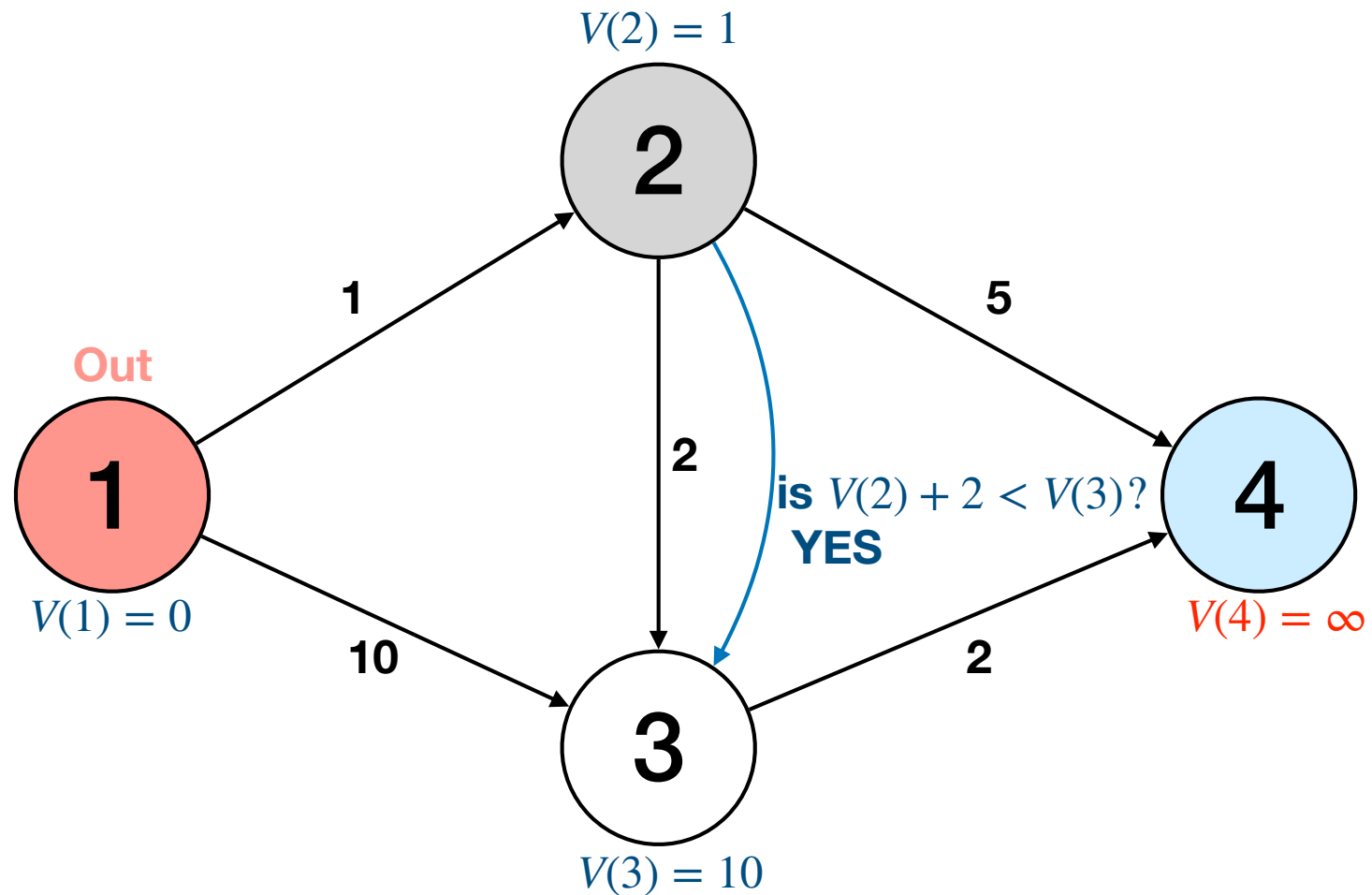
try path from node 2 to 3 ($j=3$)



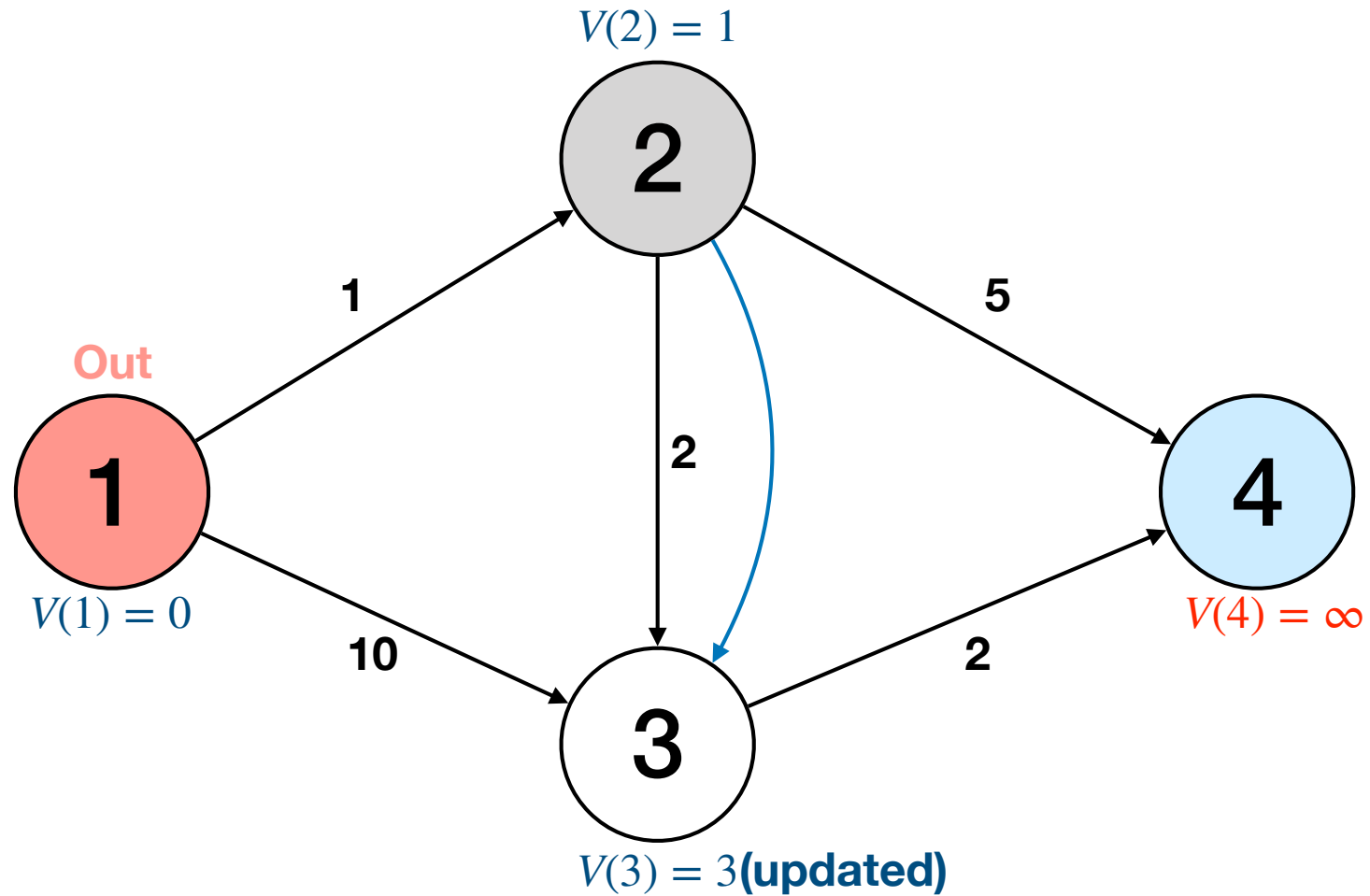
try path from node 2 to 3 ($j=3$)



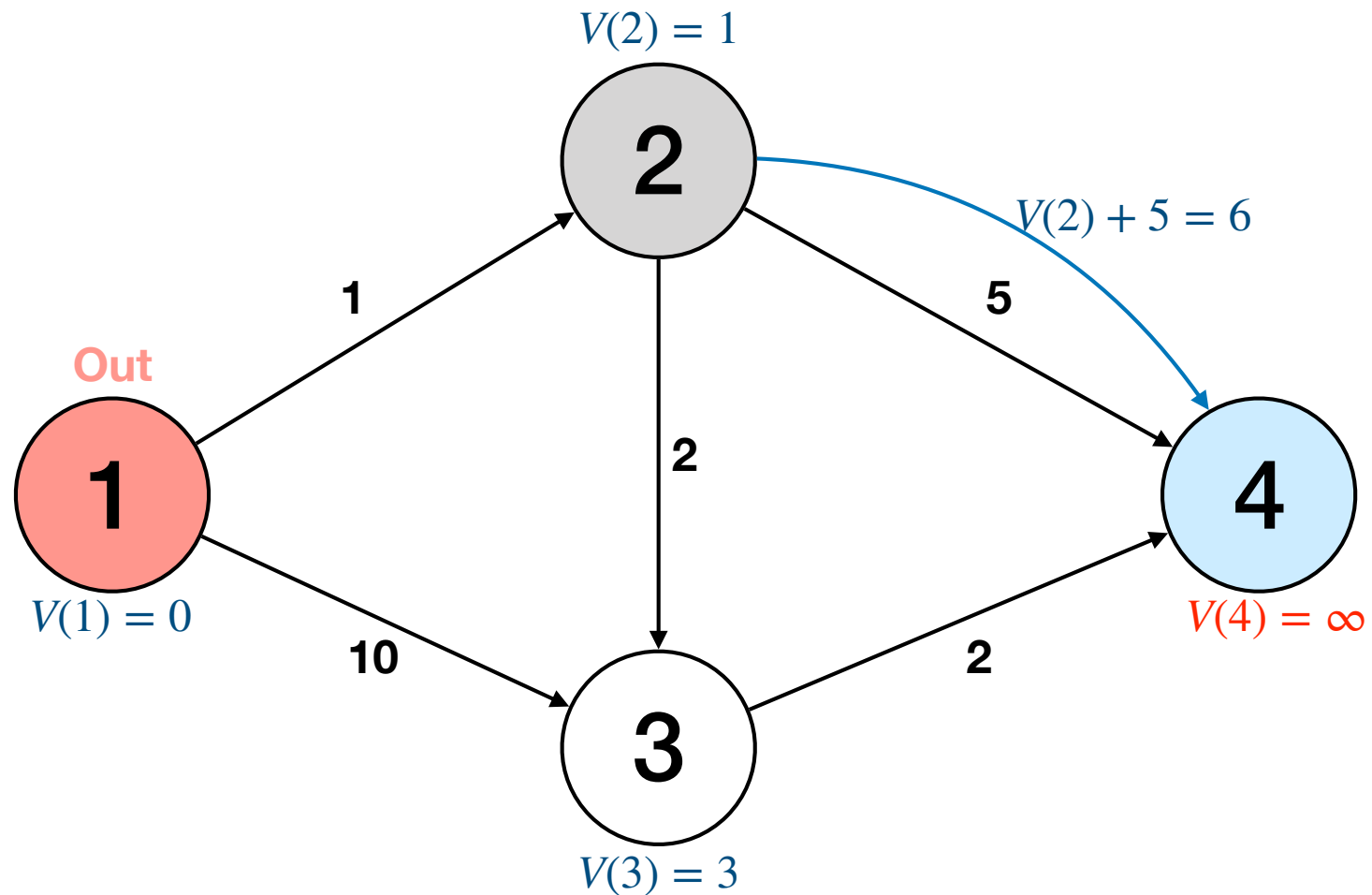
try path from node 2 to 3 ($j=3$)



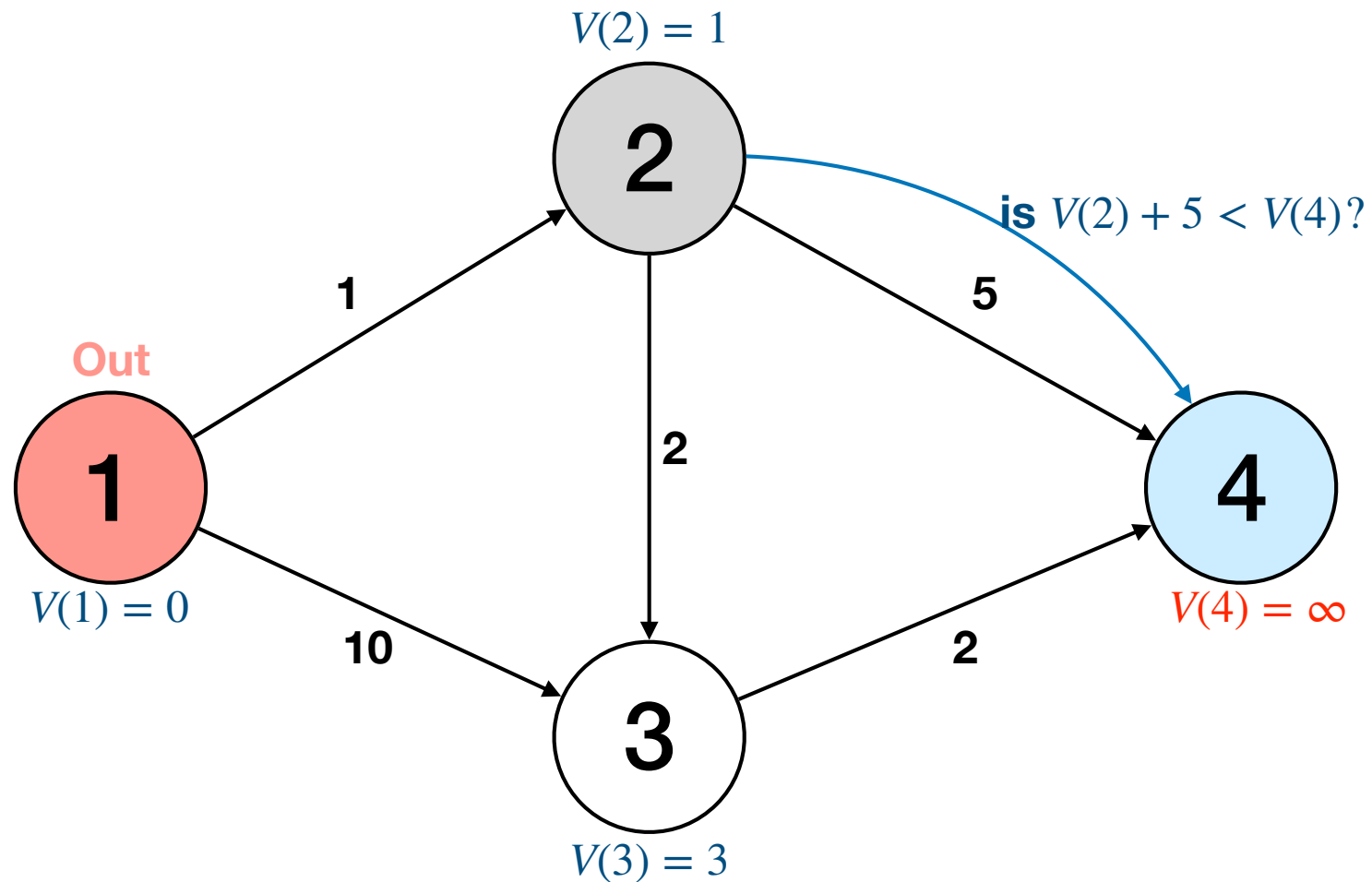
update $V(3)$



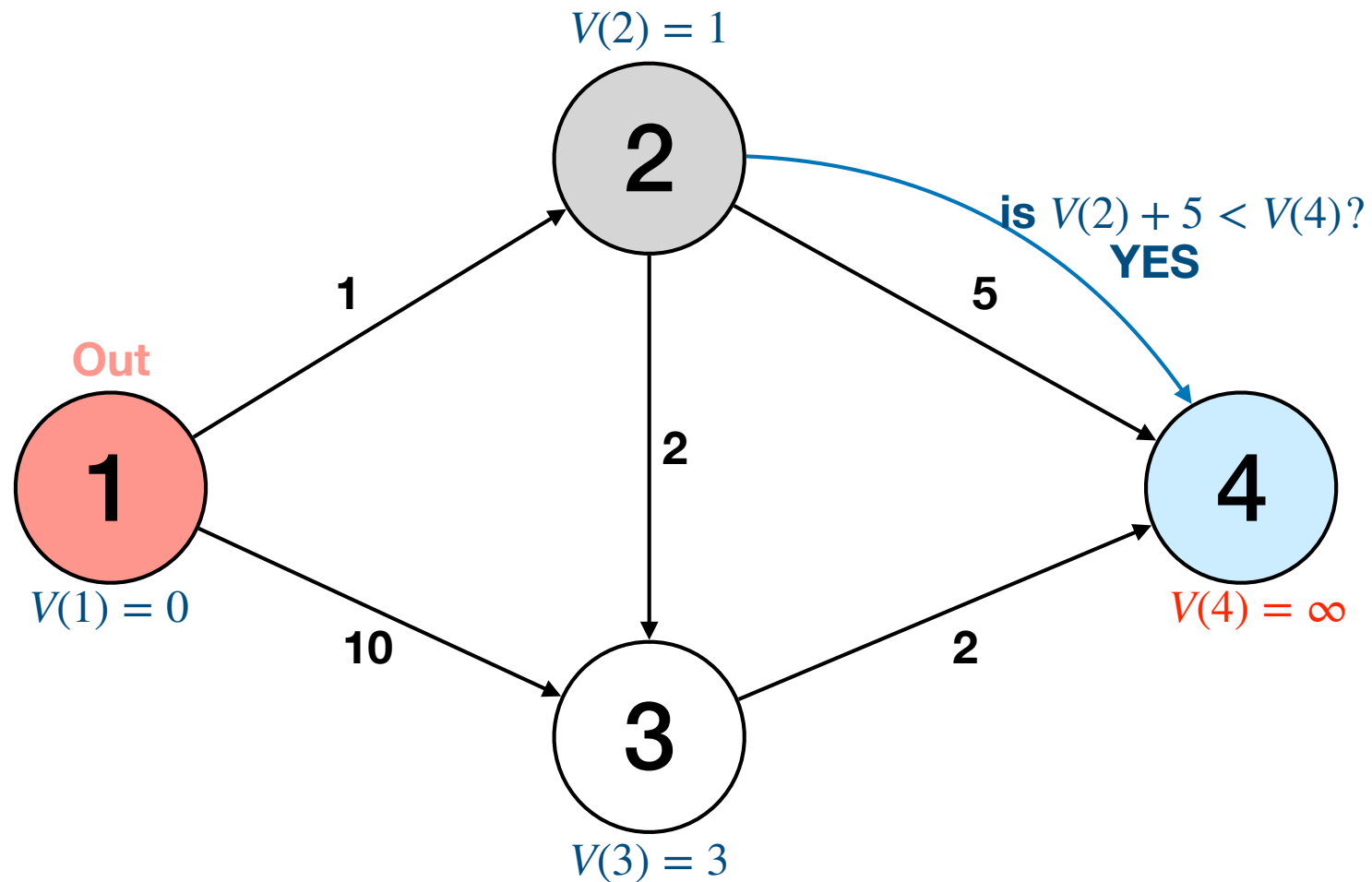
try path from node 2 to 4 ($j=4$)



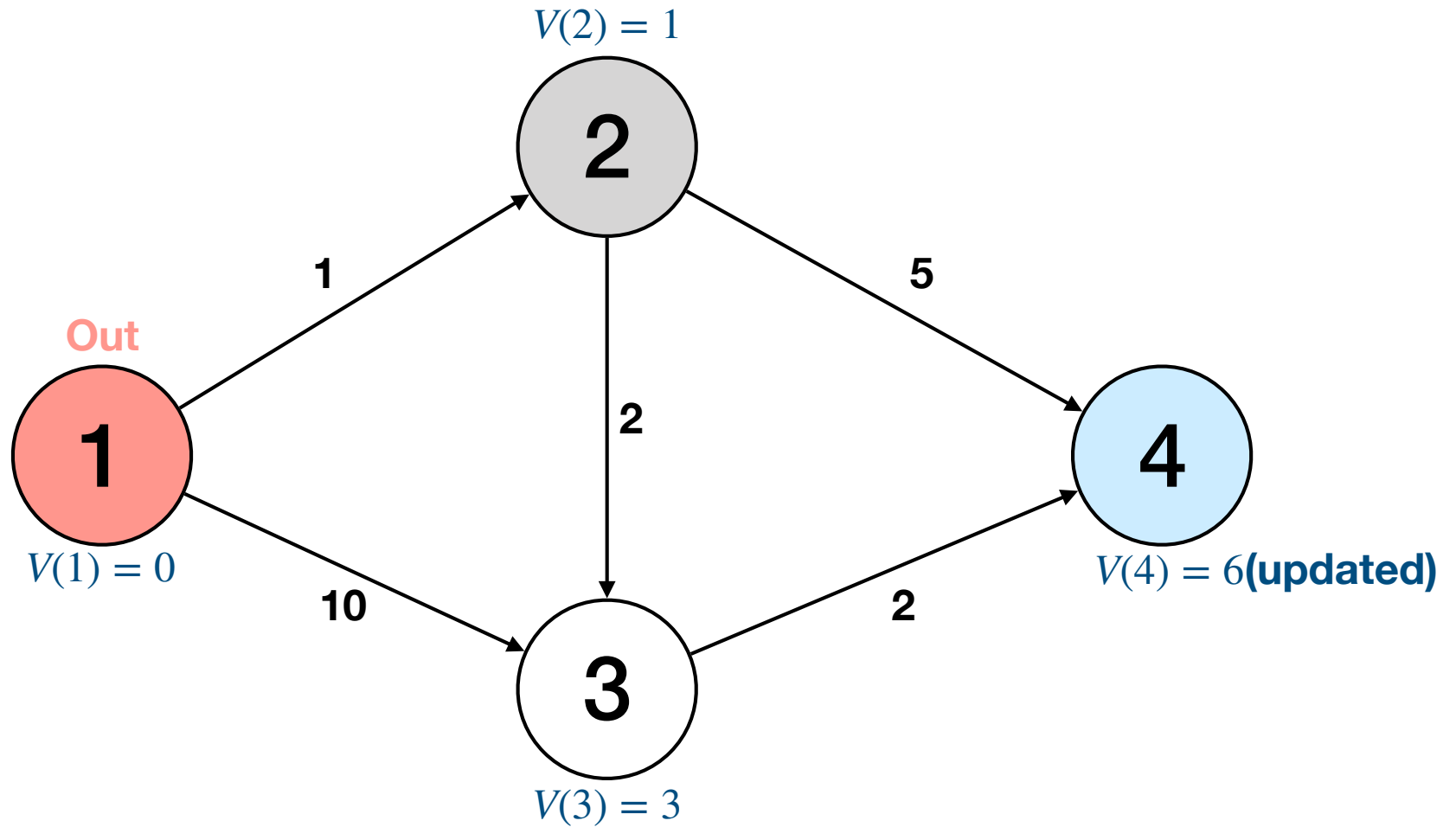
try path from node 2 to 4 ($j=4$)



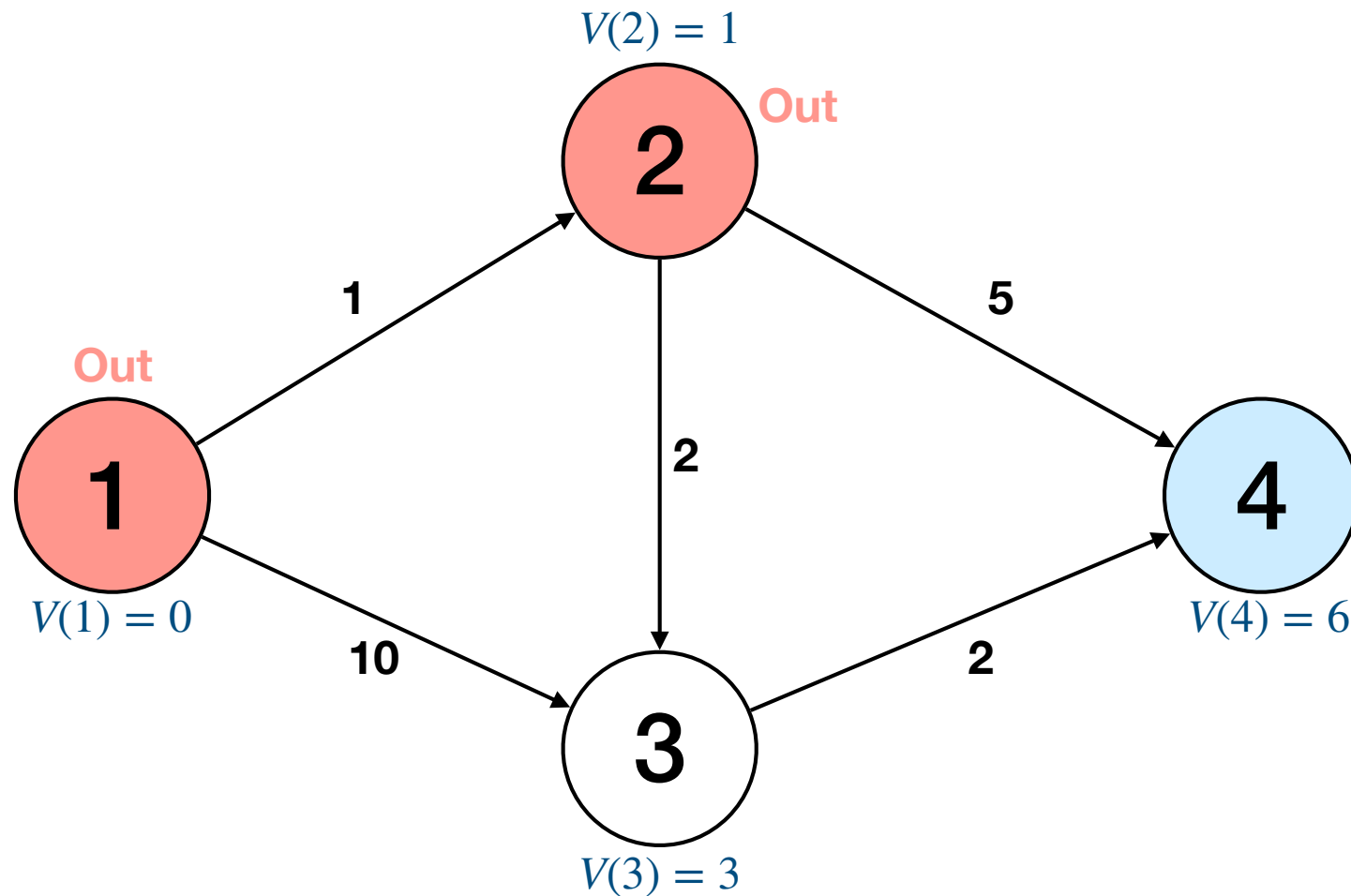
try path from node 2 to 4 ($j=4$)



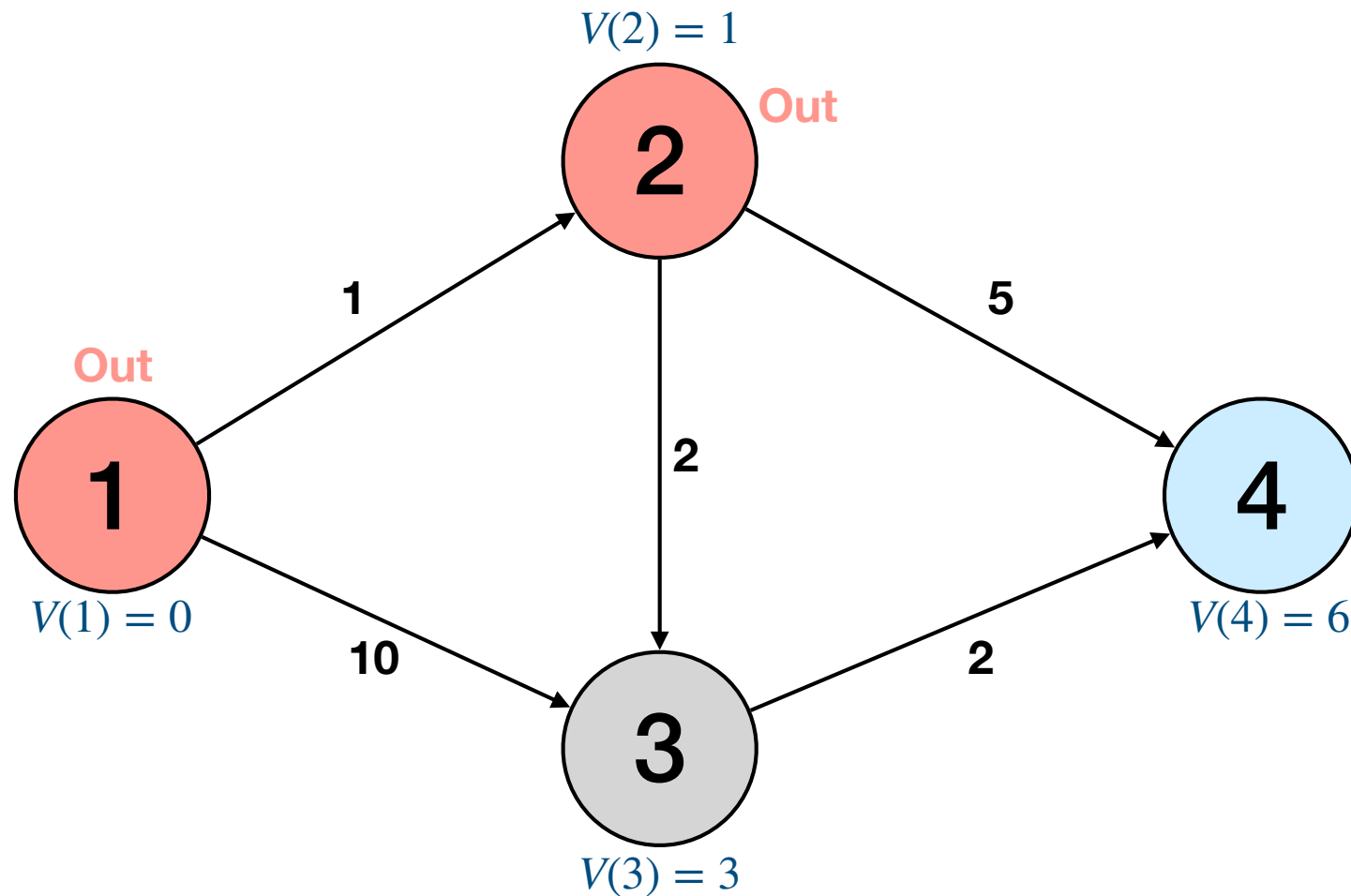
update $V(4)$



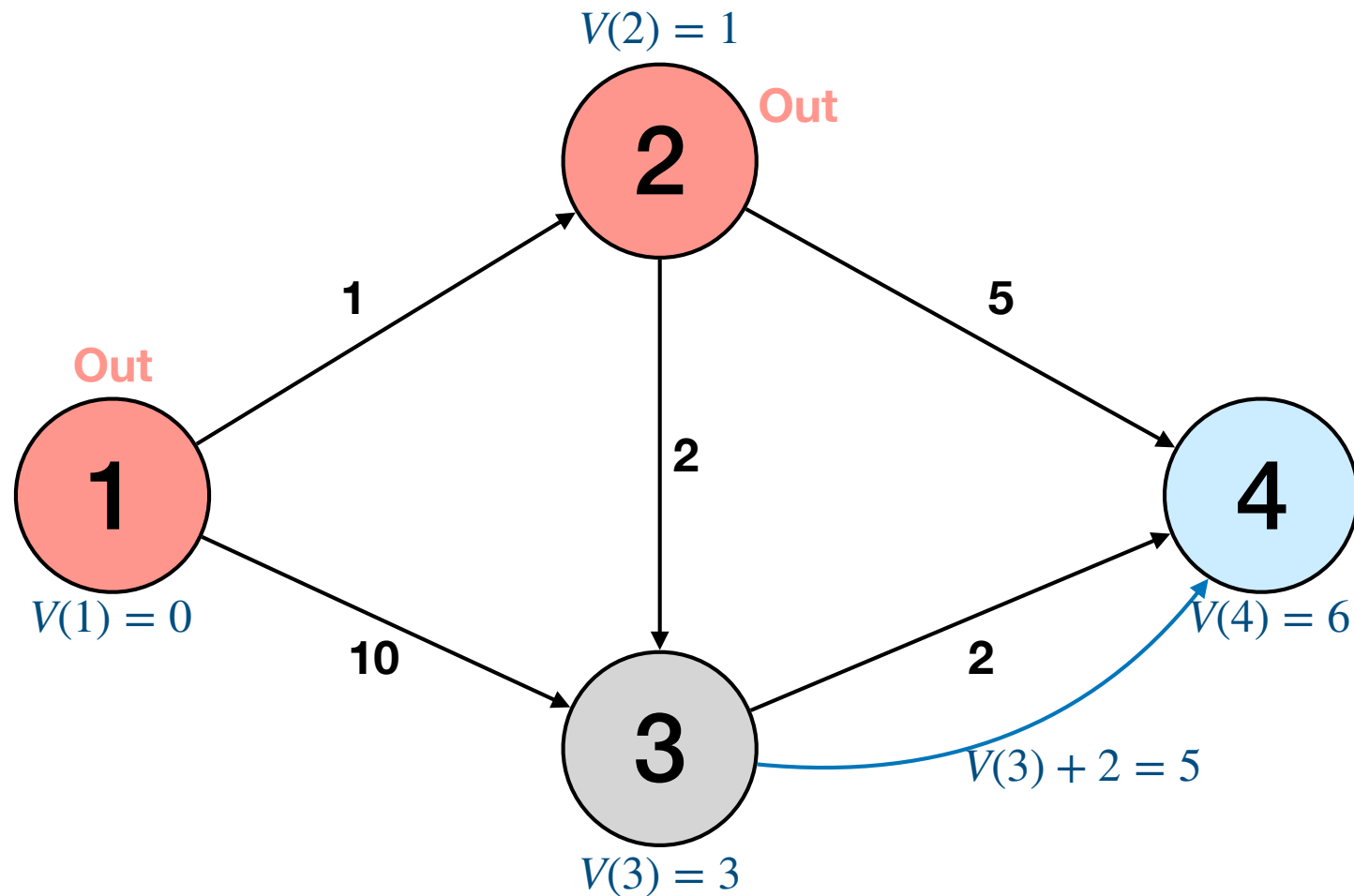
done with node 2



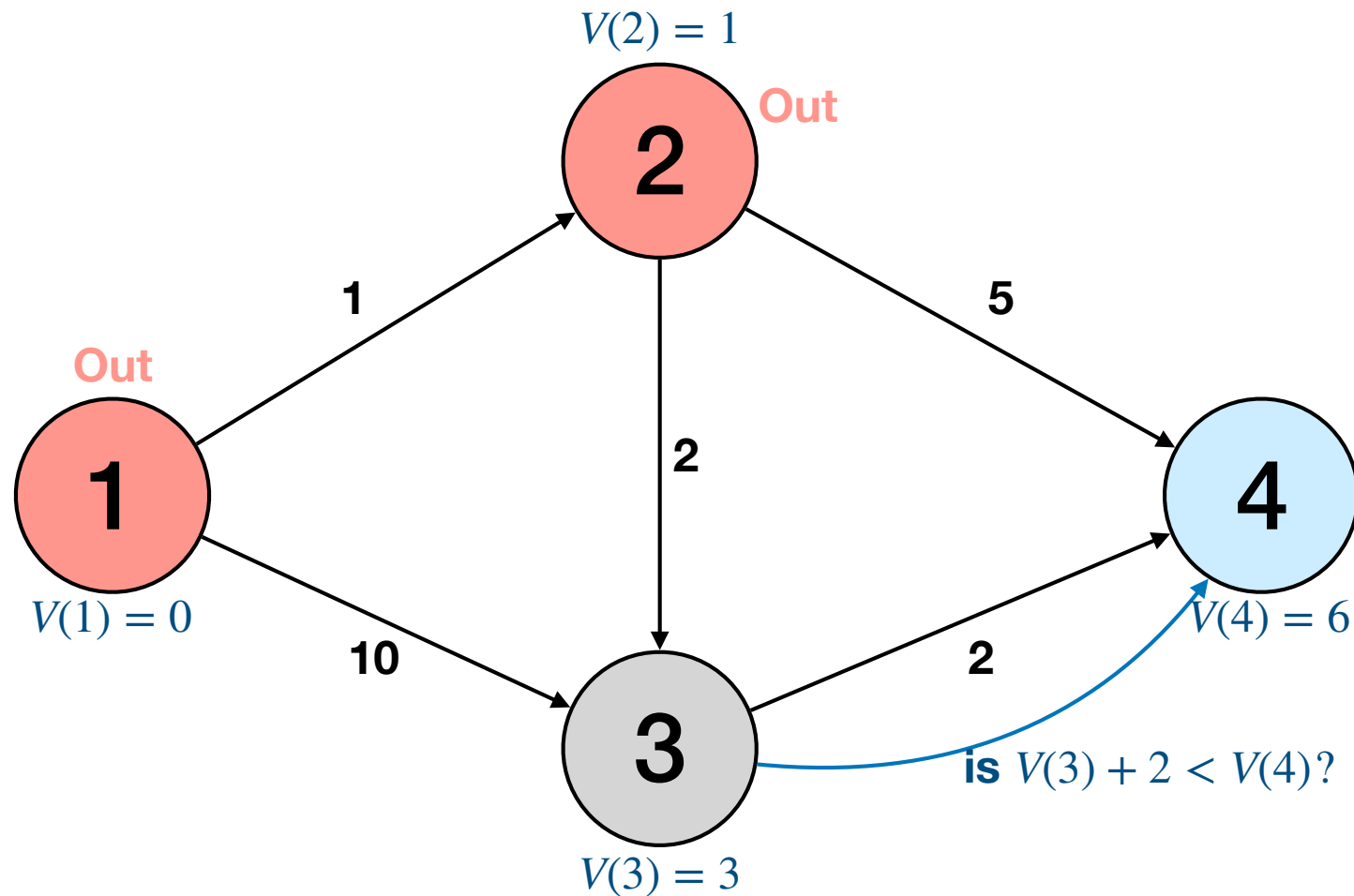
go to node 3 ($i=3$)



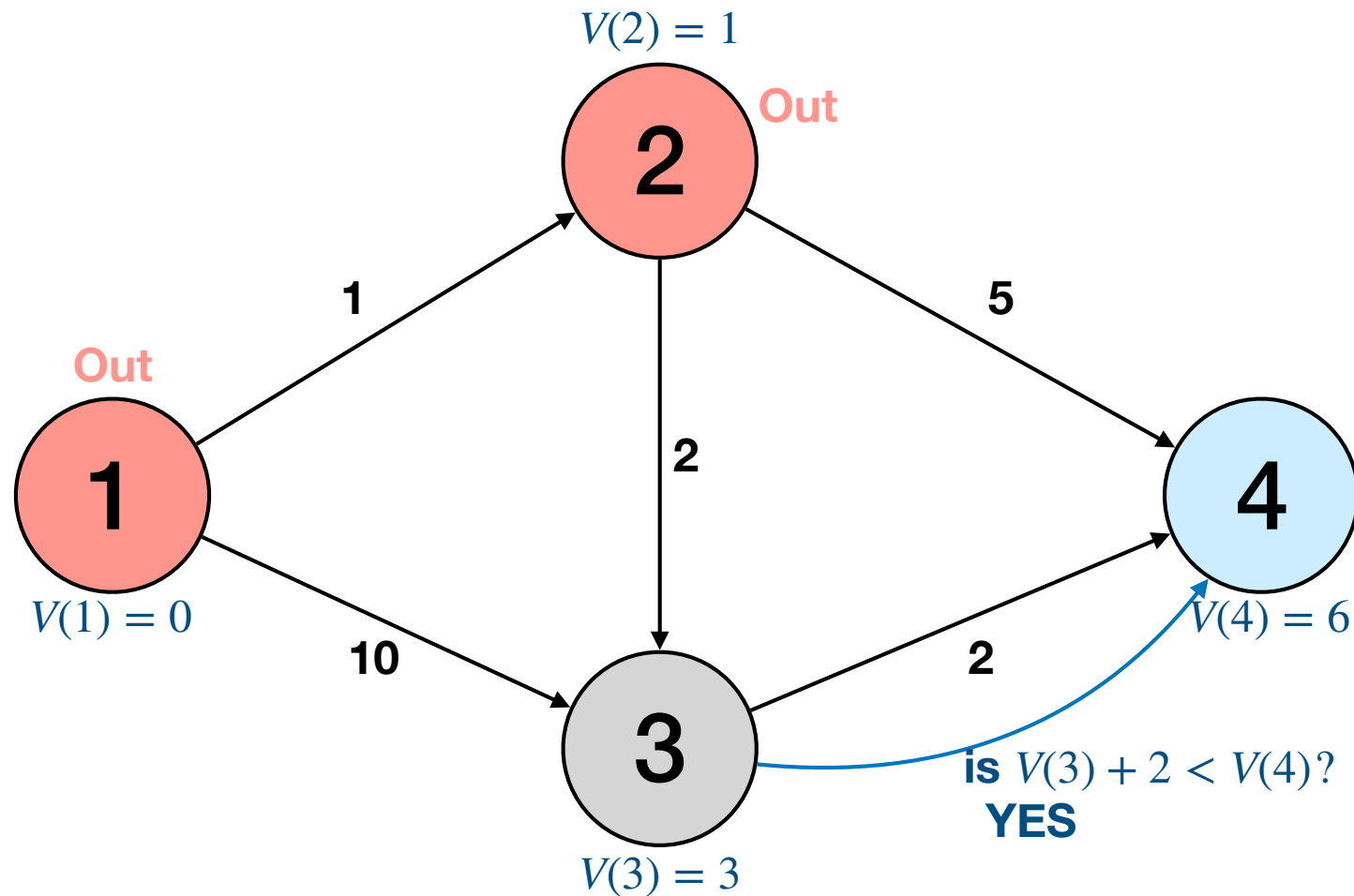
try path from node 3 to 4 ($j=4$)



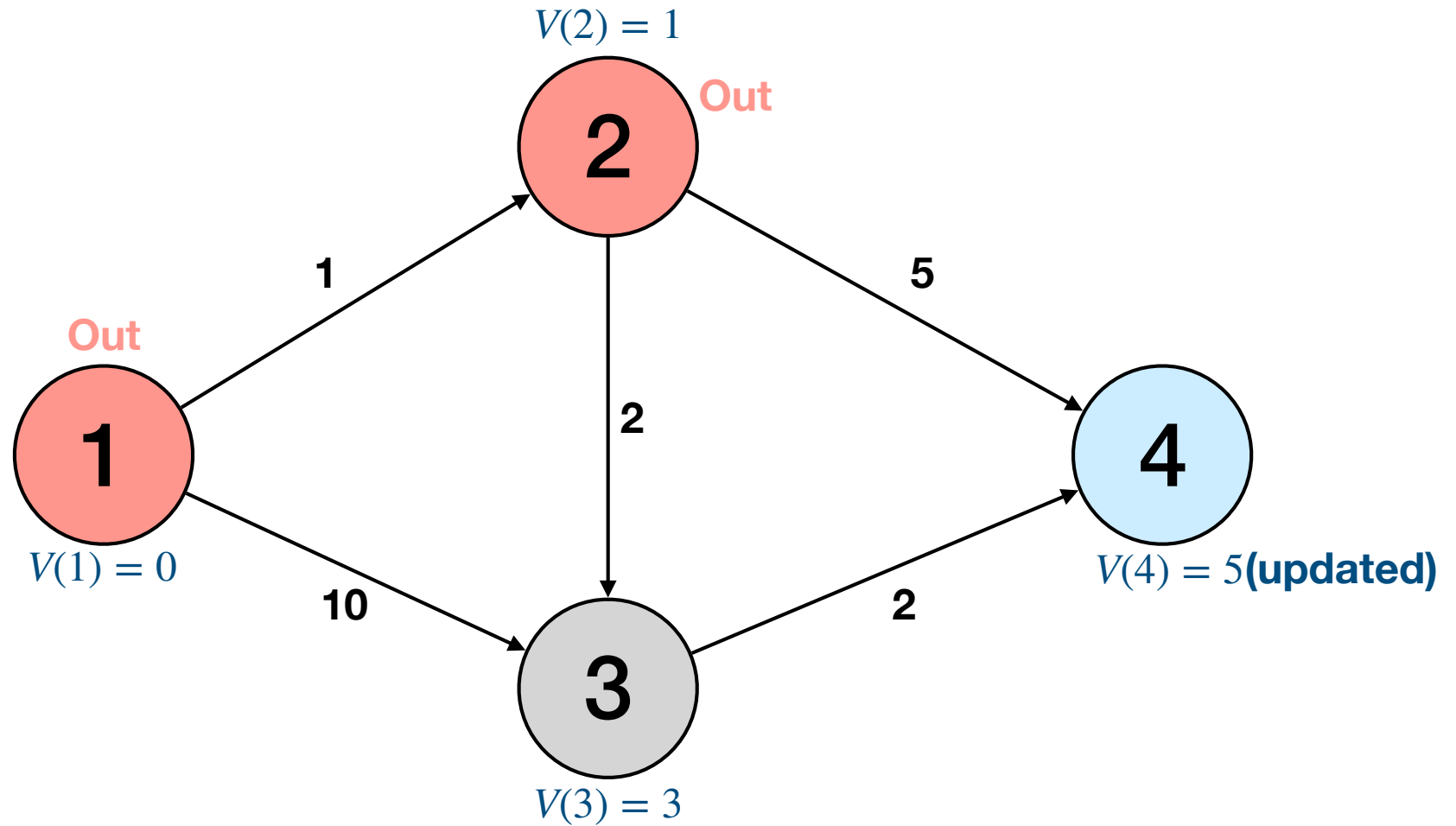
try path from node 3 to 4 ($j=4$)



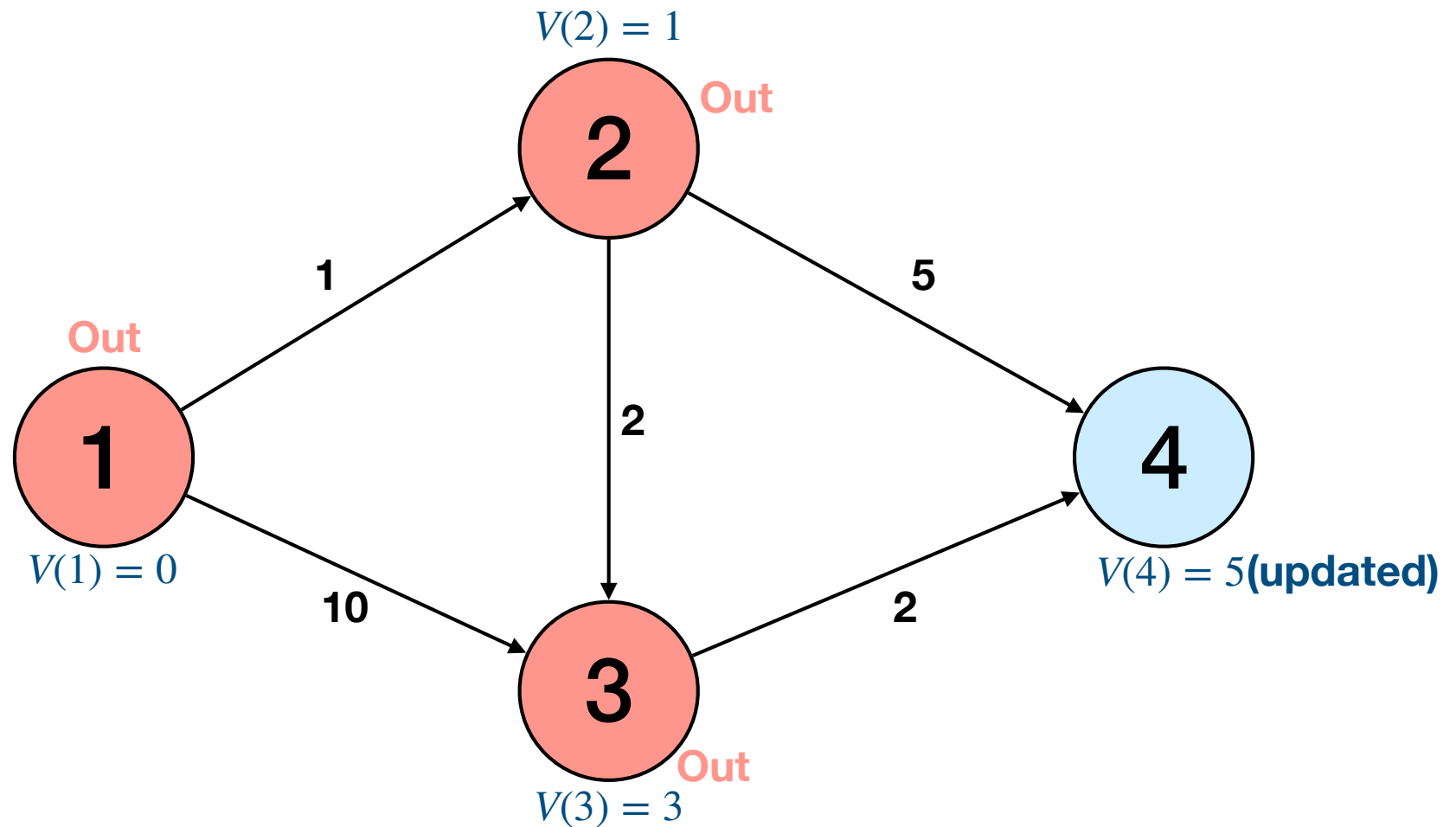
try path from node 3 to 4 (j=4)



update $V(4)$



done with node 3



Minimum travel cost is 5

