5. NETWORK FLOW

▸ *Ford–Fulkerson demo*
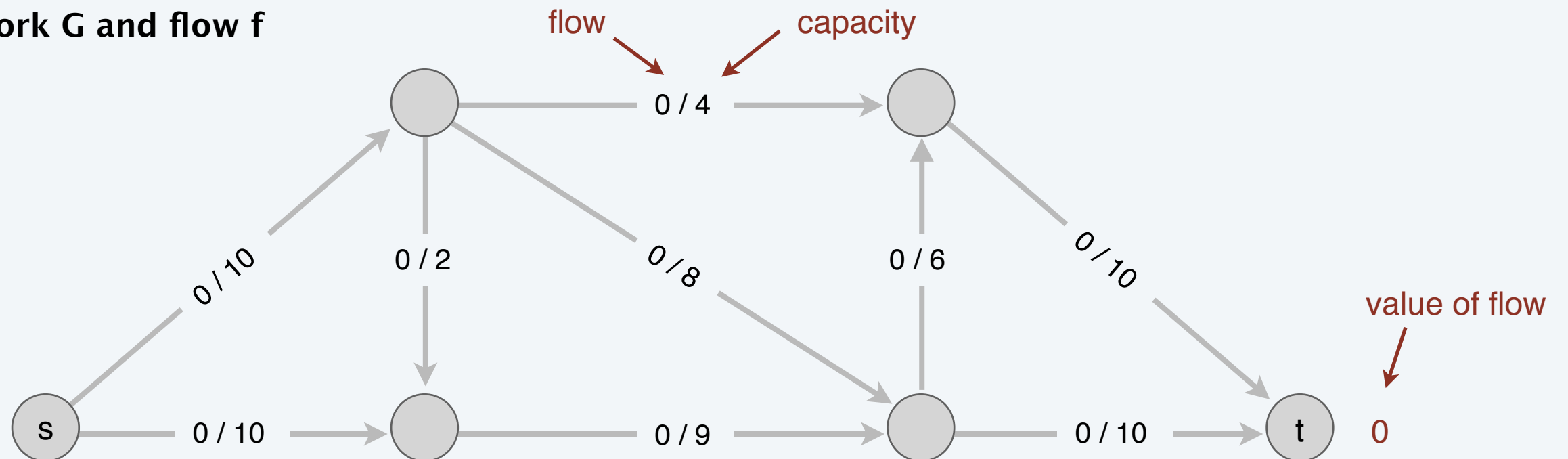
Ford–Fulkerson algorithm demo

network G and flow f

flow   capacity

0 / 4

0 / 10   0 / 2   0 / 8   0 / 6   0 / 10

value of flow

s   0 / 10   0 / 9   0 / 10   t   0

residual network G$_f$

4

residual capacity

10   2   8   6   10
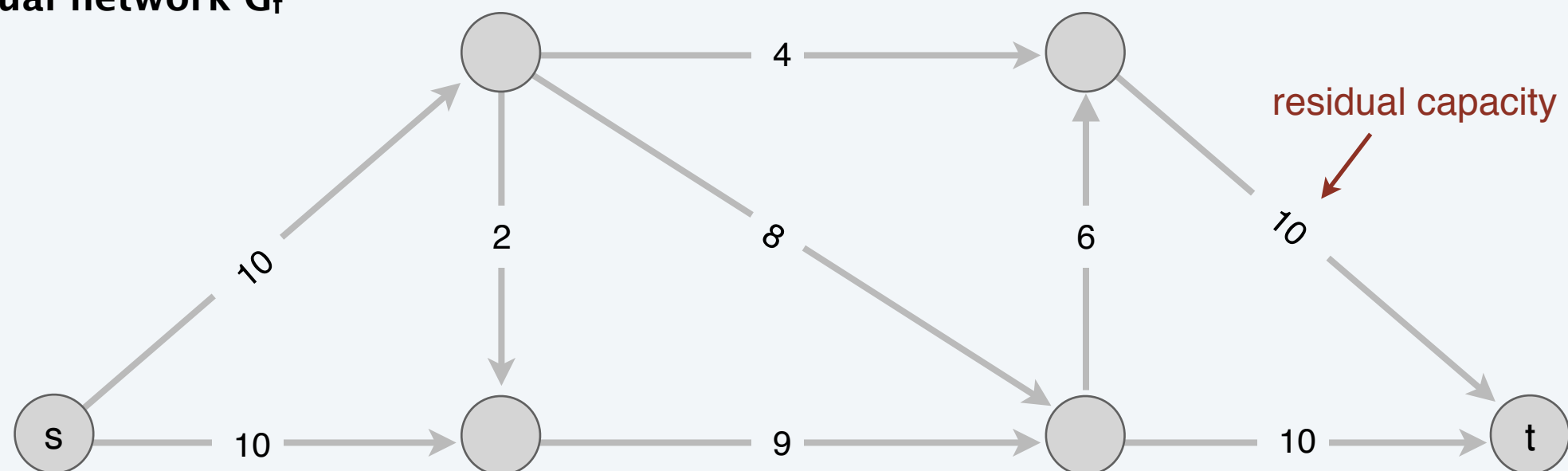
s   10   9   10   t

Ford–Fulkerson algorithm demo
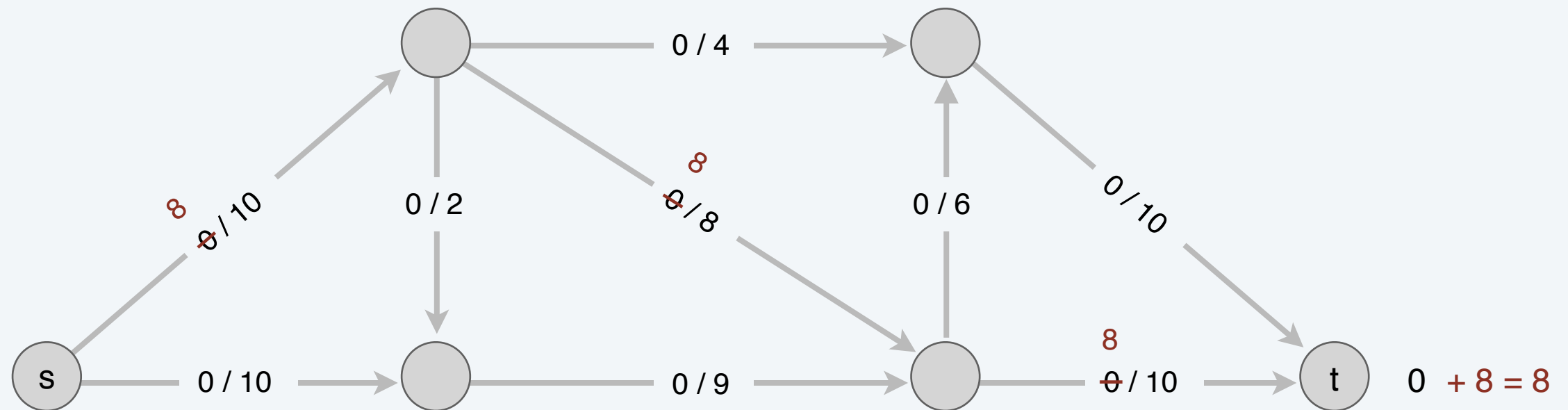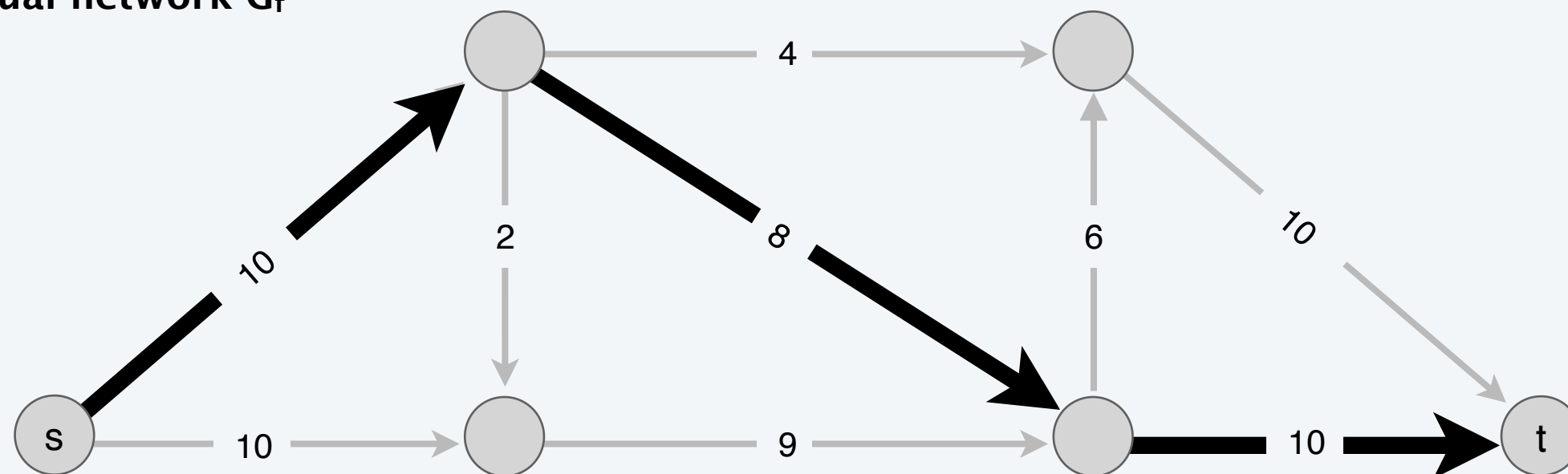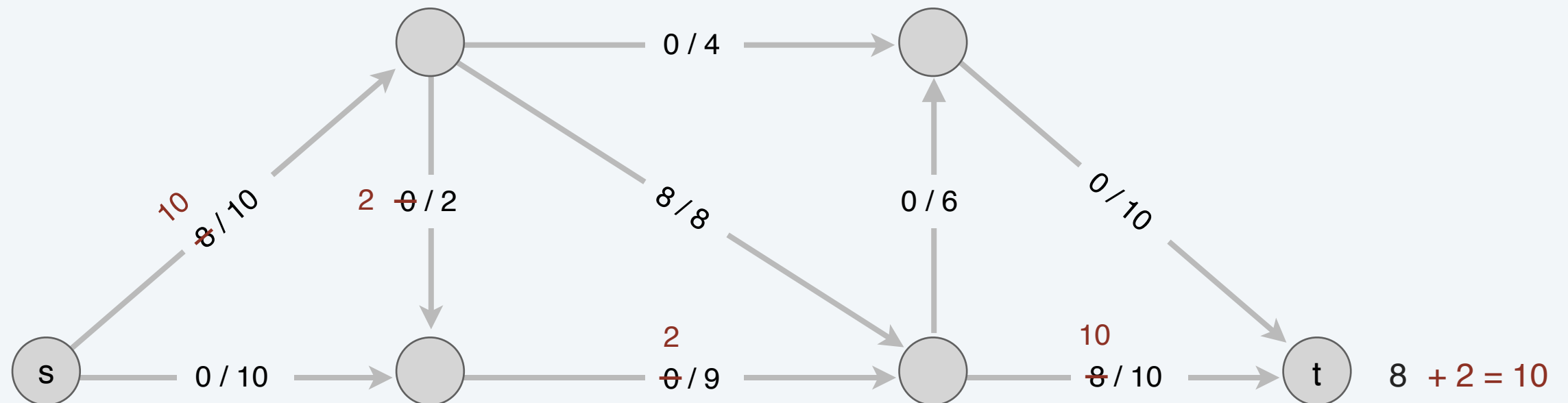
network G and flow f

residual network G_f

Ford–Fulkerson algorithm demo

network G and flow f

residual network G_f
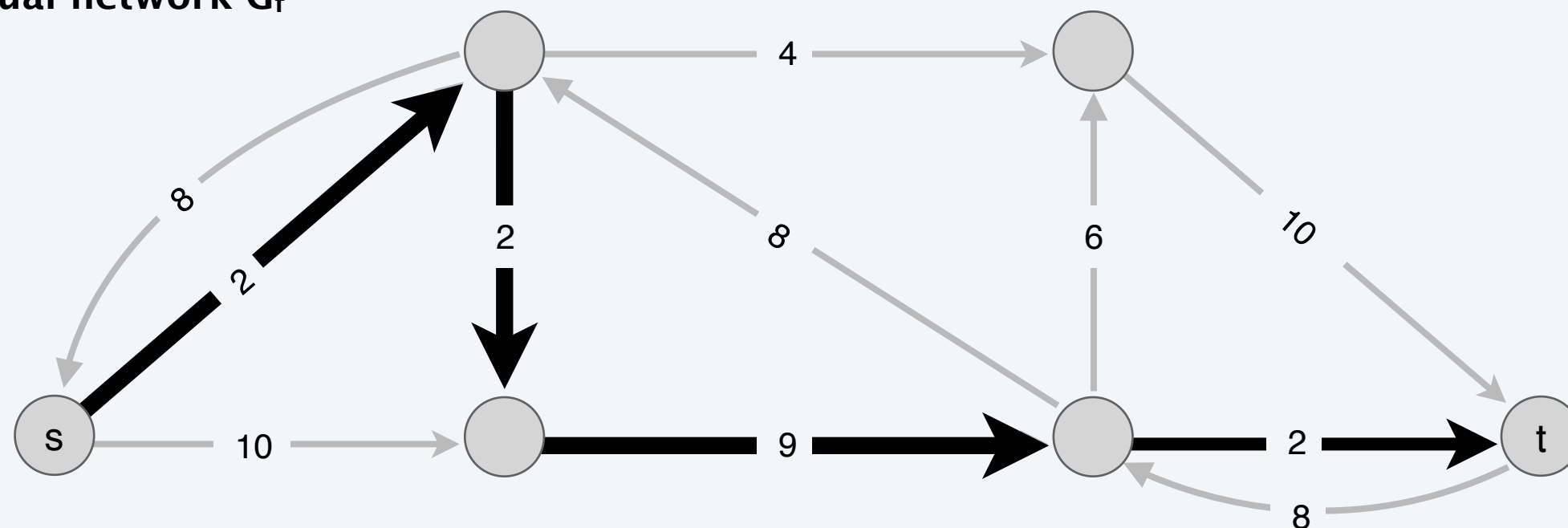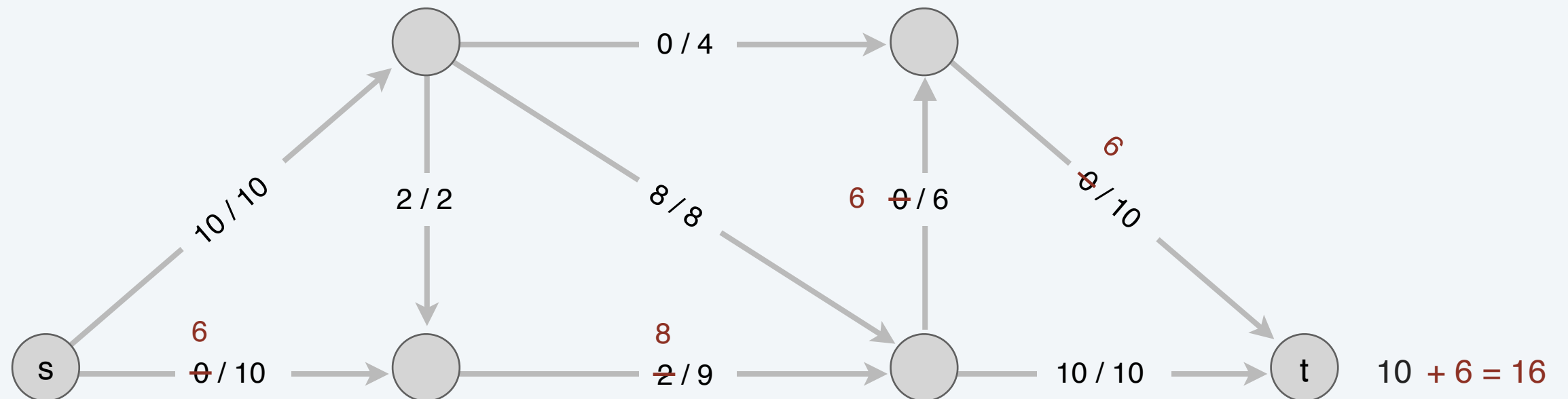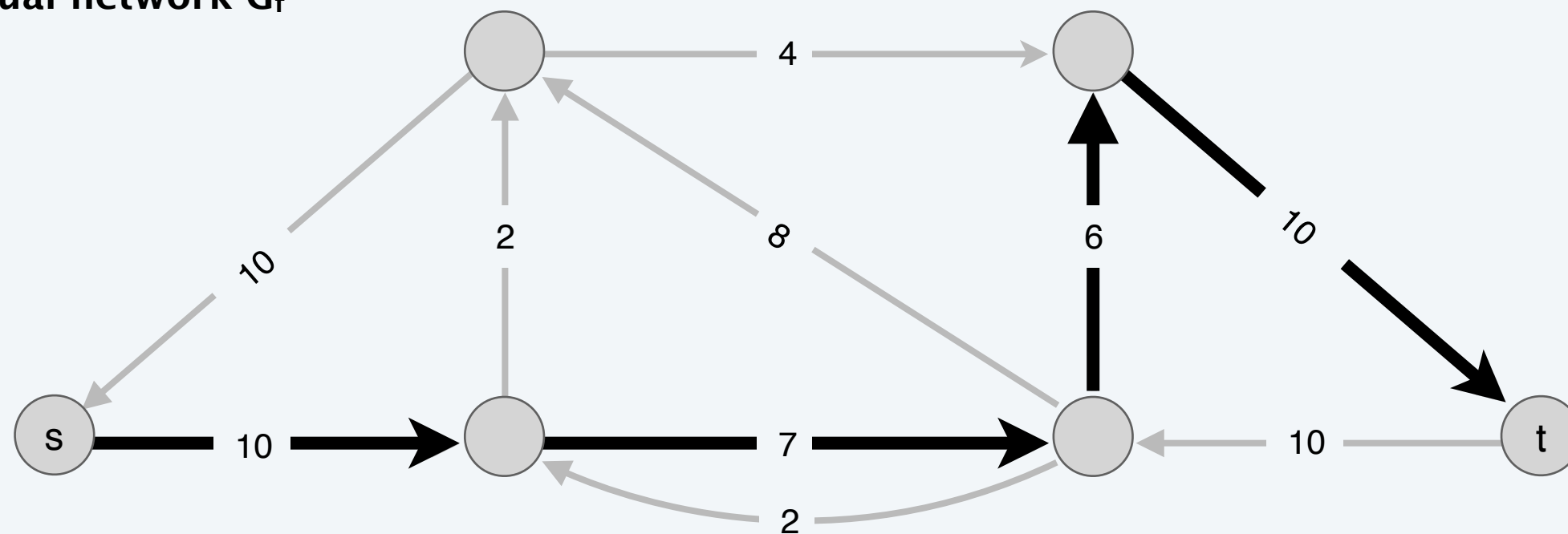
Ford–Fulkerson algorithm demo

network G and flow f

residual network G_f

Ford–Fulkerson algorithm demo

network G and flow f

$16 + 2 = 18$

residual network G_f

fixes mistake from
second augmenting path

Ford–Fulkerson algorithm demo

network G and flow f

residual network G$_f$
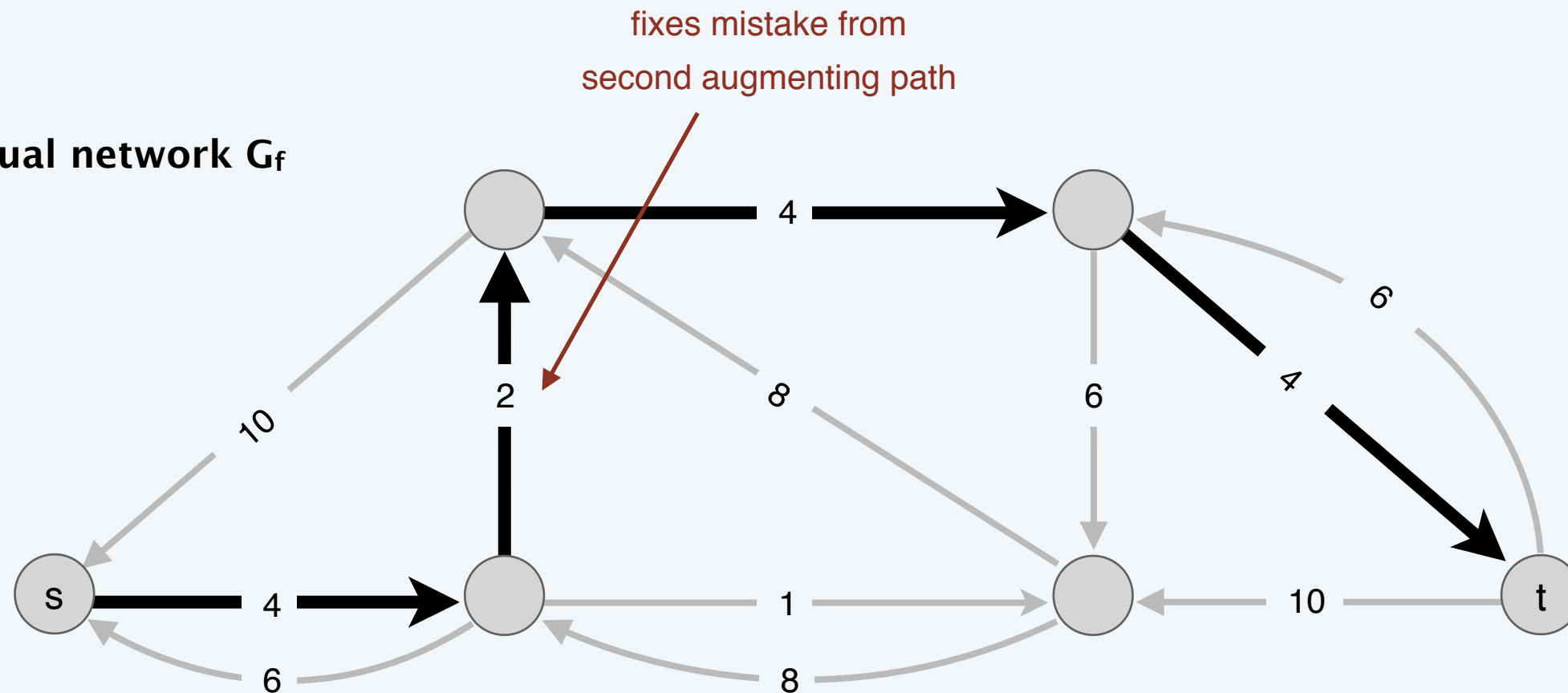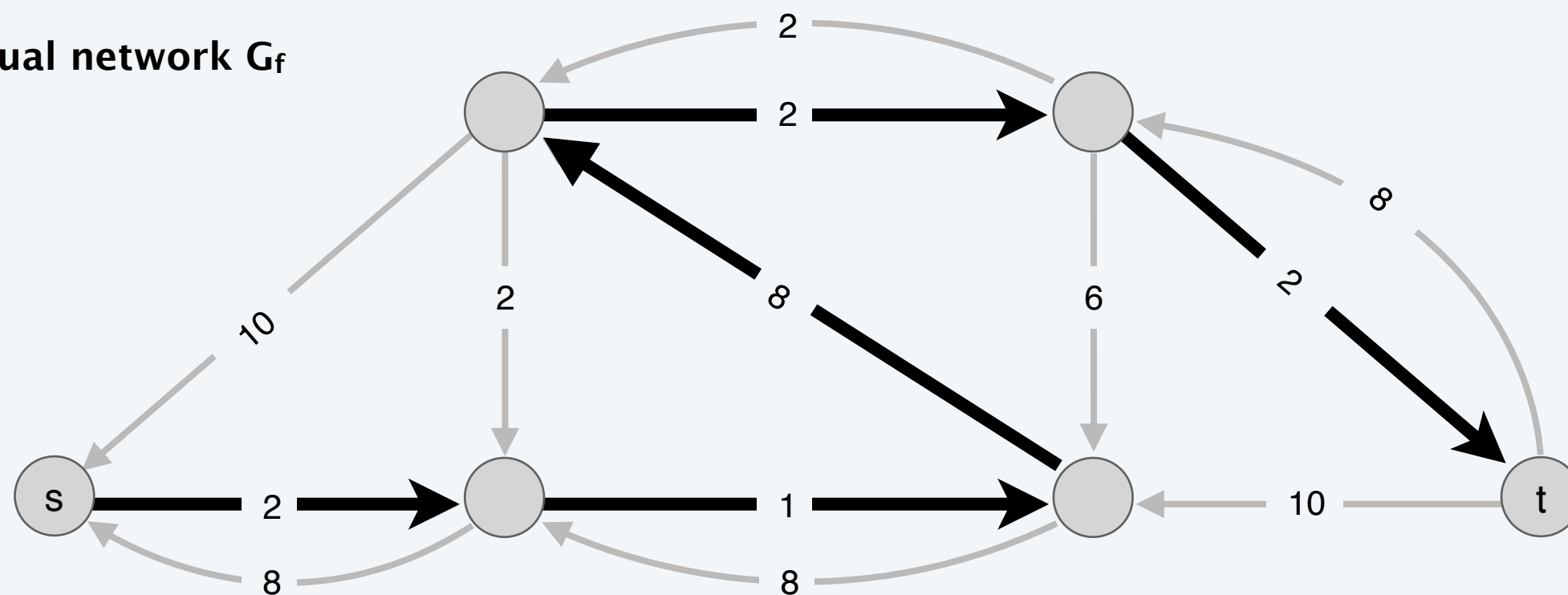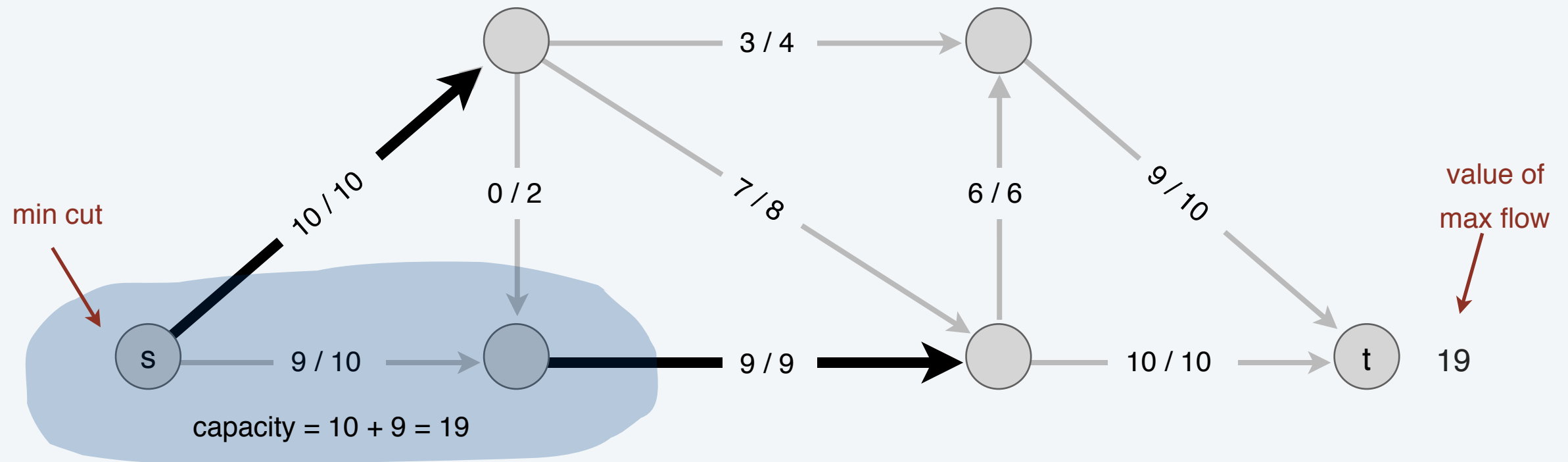
Ford–Fulkerson algorithm demo

network G and flow f

min cut

value of
max flow

capacity = 10 + 9 = 19

3 / 4

10 / 10

0 / 2

7 / 8

6 / 6

9 / 10

9 / 10

9 / 9

10 / 10

s

t

19

residual network G$_f$

nodes reachable from s

3

1

9

10

2

7

6

1

1

10

1

9

9

s

t