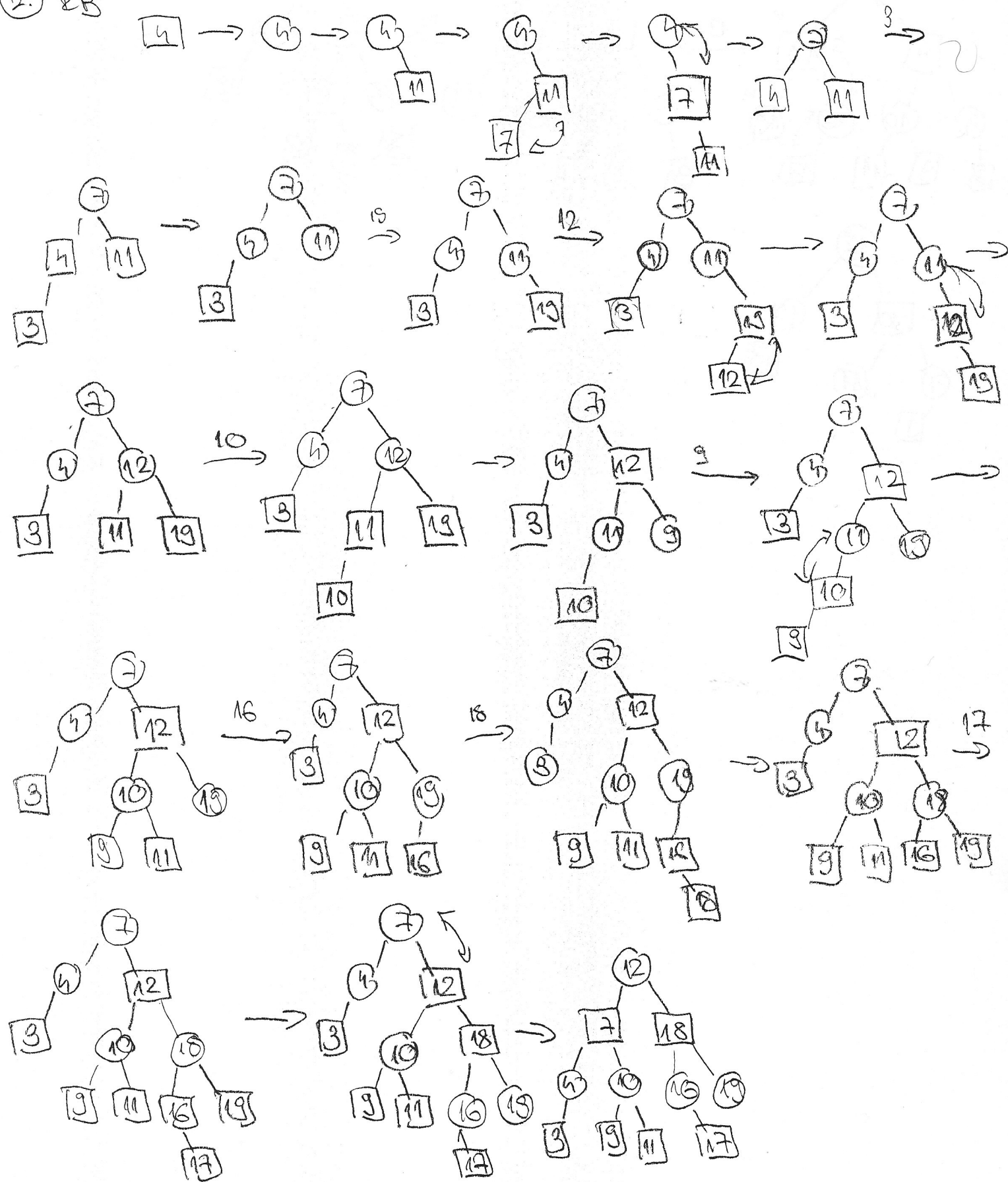


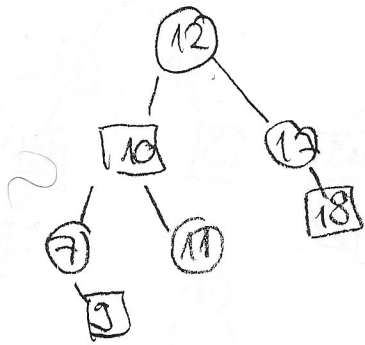
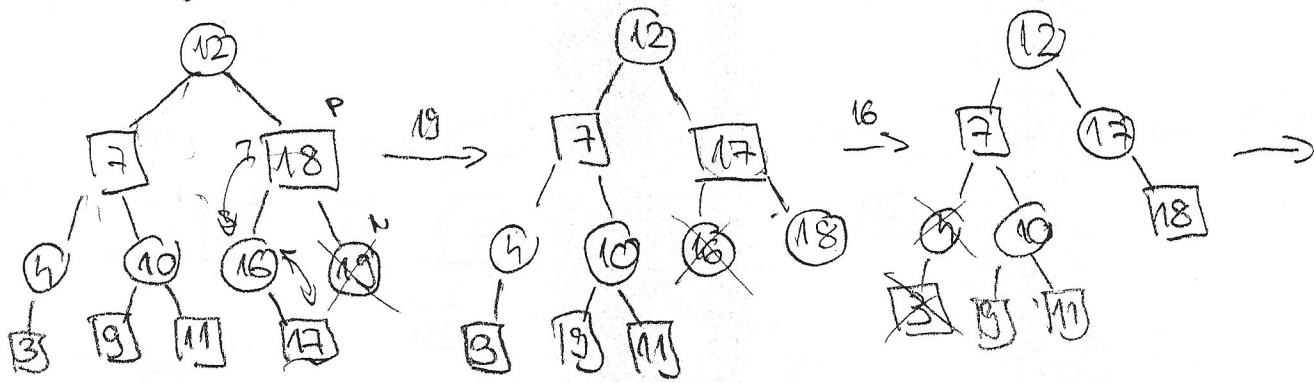
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① AVL

② RB

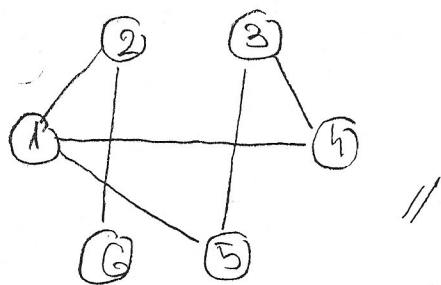
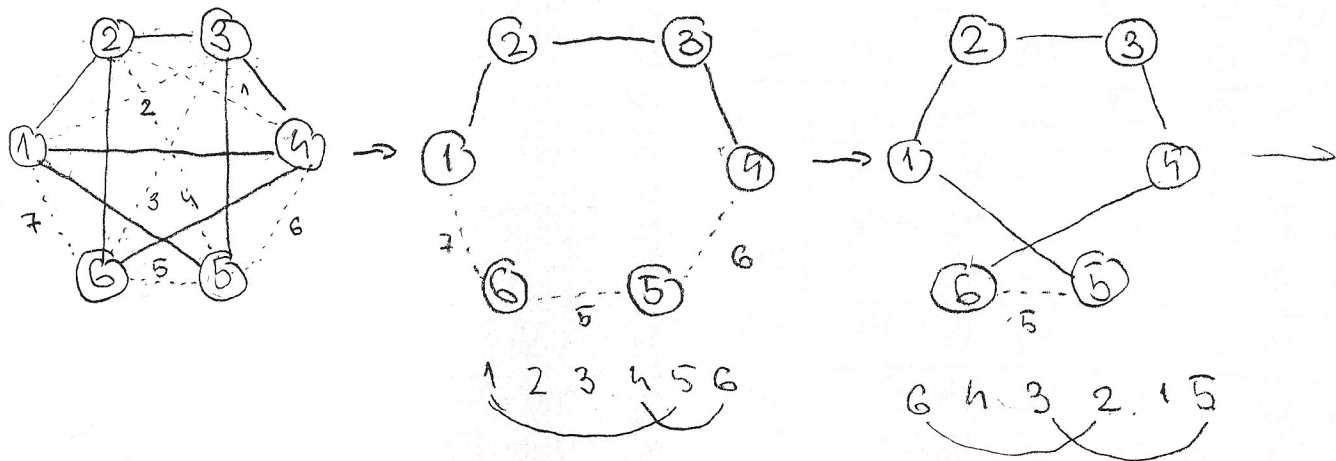


# BRISANJE



③ BOLDY - CHUATAL

a) Neka je  $G=(V,E)$  jednostavni (simple) nesmjereni graf za koji vrijedi  $|V|=n \geq 3$  i neka su  $u$  i  $v$  nesusjedni vrhovi u njemu za koje vrijedi  $\deg(u) + \deg(v) \geq n$ . Tada je  $G' = G + (u,v)$  Hamiltonov graf ako i samo ako je  $G$  Hamiltonov graf



④ max  $2x_1 + 3x_2 + x_3$

$$\begin{aligned} x_1 + x_2 + x_3 &\leq 40 \\ 2x_1 + x_2 - x_3 &\geq 10 \\ x_2 - x_3 &\leq -10 \\ x_3 - x_2 &\geq 10 \\ x_1, x_2, x_3 &\geq 0 \end{aligned}$$

$$\begin{aligned} x_1 + x_2 + x_3 + y_1 &= 40 \\ 2x_1 + x_2 - x_3 - y_2 + a_1 &= 10 \\ x_3 - x_2 - y_3 + a_2 &= 10 \end{aligned}$$

	$x_1$	$x_2$	$x_3$	$y_1$	$y_2$	$y_3$	$a_1$	$a_2$	
$y_1$	1	1	1	1	0	0	0	0	40
$a_1$	2	1	-1	0	-1	0	1	0	10
$a_2$	0	-1	1	0	0	-1	0	1	10
$(-2)$	0	0	0	0	1	1	0	0	-20
$y_1$	0	1/2	3/2	1	1/2	0	-1/2	0	35
$x_1$	1	1/2	-1/2	0	-1/2	0	1/2	0	5
$a_2$	0	-1	1	0	0	-1	0	1	10
	0	1	-1	0	0	1	1	-1	-10
$y_1$	0	2	0	1	1/2	3/2	-1/2	-3/2	20
$x_1$	1	0	0	0	-1/2	-1/2	1/2	1/2	10
$x_3$	0	-1	1	0	0	-1	0	1	10

11. faz2a

	$x_1$	$x_2$	$x_3$	$y_1$	$y_2$	$y_3$	
$y_1$	0	(2)	0	1	1/2	3/2	20
$x_1$	1	0	0	0	-1/2	-1/2	10
$x_3$	0	-1	1	0	0	-1	10
	-2	-3	-1	0	0	0	0
$x_2$	0	1	0	1/2	1/4	3/4	10
$x_1$	(1)	0	0	0	-1/2	-1/2	10
$x_3$	0	0	1	1/2	1/4	3/4	20
	-2	0	-1	3/2	3/4	9/4	30
$x_2$	0	1	0	1/2	1/4	3/4	10
$x_1$	1	0	0	0	-1/2	-1/2	10
$x_3$	0	0	(1)	1/2	1/4	3/4	20
	0	0	-1	3/2	1/4	1/4	50
$x_2$	0	1	0	1/2	1/4	3/4	10
$x_1$	1	0	0	0	-1/2	-1/2	10
$x_3$	0	0	1	1/2	1/4	3/4	20
	0	0	0	2	0	1	70

$$x_1 = 10$$

$$x_2 = 10$$

$$x_3 = 20$$

