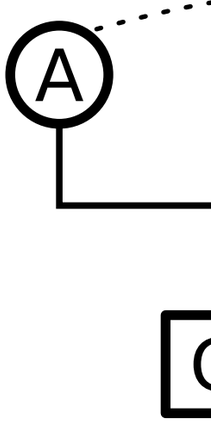
Input



recombination cost

91 22 87

0_{32}	-	-	0_{34}
1_{15}	0_{25}	0_{13}	-
1_{7}	$\mathbf{1}_{3}$	0_{15}	-
-	0_{12}	0_{23}	1_{29}
-	-	1	0_{17}

1_{32}	1_{12}	1_{21}	1_{34}
$\mathbf{1}_{5}$	0_{25}	0_{13}	-
1_{17}	1_{31}	1_{15}	-
-	0_{12}	0_{23}	0_{29}
-	-	1_{18}	1_{17}

1_{32}	-	1_{24}	-
0_{15}	0_{25}	0_{13}	-
1_{27}	0_{33}	1_{25}	-
-	0_{42}	1_{23}	0_{29}
-	-	0	0_{17}

Output

0	-	-	0
1	0	0	-
1	$\mathbf{0}_{3}$	0	-
-	0	0	1
-	-	1	0

haplotypes:

1 0 22 0 1

0 1 1 0

1	1	1	1
$\mathbf{0}_{5}$	0	0	-
1	1	1	-
-	0	0	0
-	-	1	1

haplotypes:

1 1 1 1

0 0 0 0

1	-	1	-
0	0	0	-
1	0	1	-
-	0	1	0
-	-	0	0

haplotypes:

0 0 0 0

1 0 1 0

$t_{m \to c}$

$t_{f \to c}$

Cost: 3 + 5 + 22

minimize $\sum_{i \in \mathcal{I}} \sum_{(j,k) \in E_i} \mathcal{W}_i(j,k) + \sum_{(m,f,c) \in \mathcal{T}} \mathcal{X}(t_{m \to c}) + \mathcal{X}(t_{f \to c})$