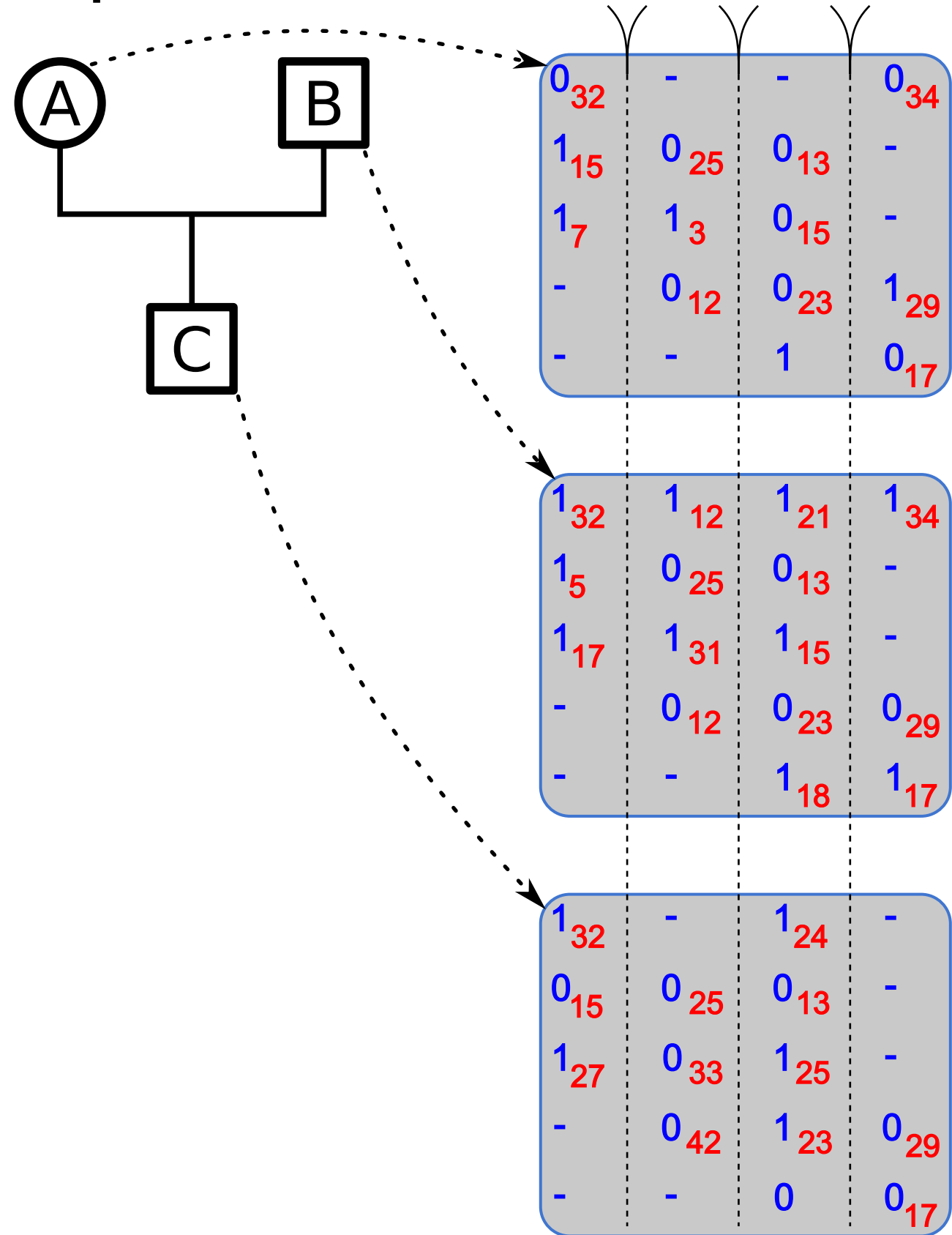


Input



Output

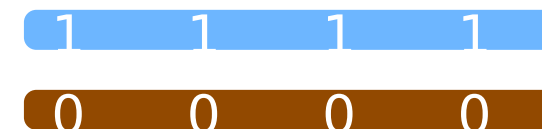
0	-	-	0
1	0	0	-
1	0 ₃	0	-
-	0	0	1
-	-	1	0

haplotypes:



1	1	1	1
0 ₅	0	0	-
1	1	1	-
-	0	0	0
-	-	1	1

haplotypes:



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

haplotypes:

