ALGORITMOS DE GRAFOS

75.41 - ALGORITMOS Y PROGRAMACIÓN II

FACULTAD
DE INGENIERIA
Universidad de Buenos Aires

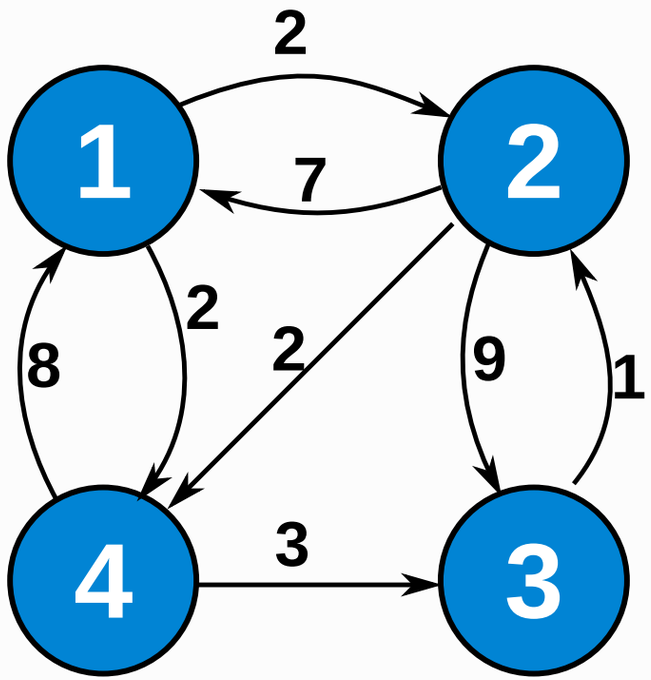
LUCAS PANDOLFO - 1ER CUATRIMESTRE 2019

FACULTAD
DE INGENIERIA
Universidad de Buenos Aires

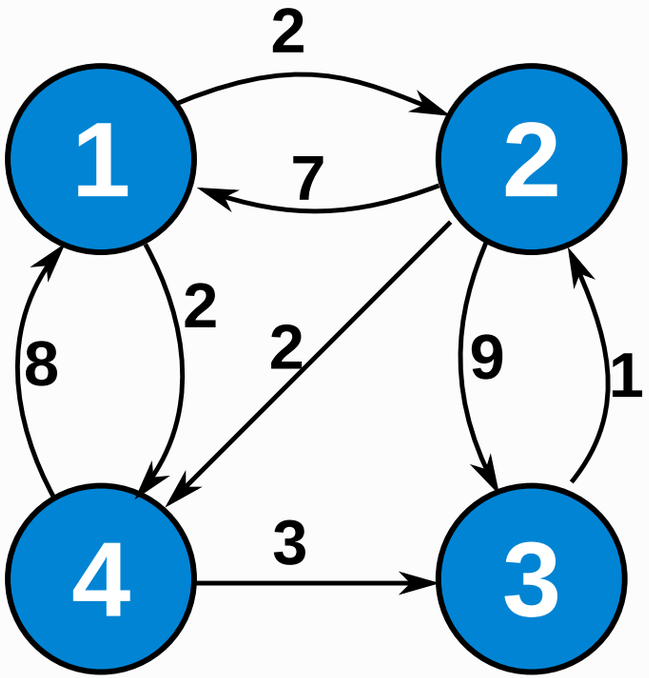
FLOYD-WARSHALL

ALGORITMO DE FLOYD

ENCUENTRA EL CAMINO MÍNIMO ENTRE TODOS LOS PARES DE VERTICES



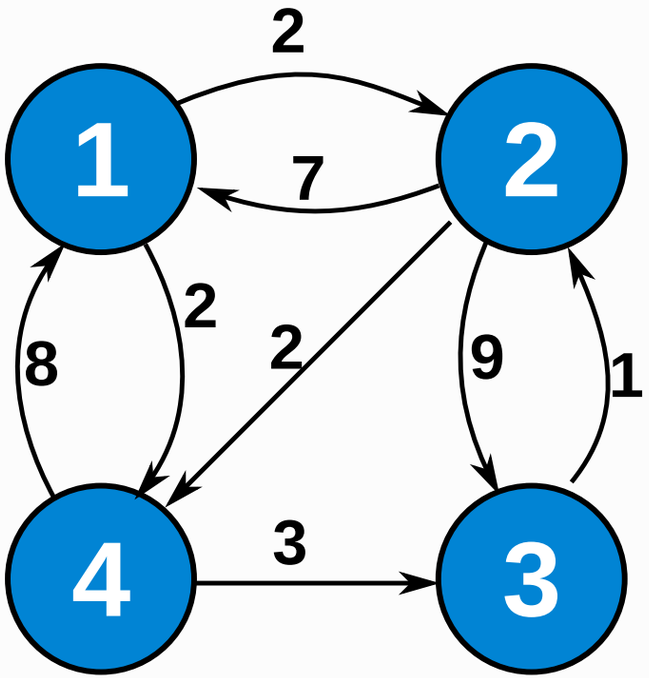
ALGORITMO DE FLOYD



	1	2	3	4
1	0	2	∞	2
2	7	0	9	2
3	∞	1	0	∞
4	8	∞	3	0

MATRIZ DE DISTANCIAS

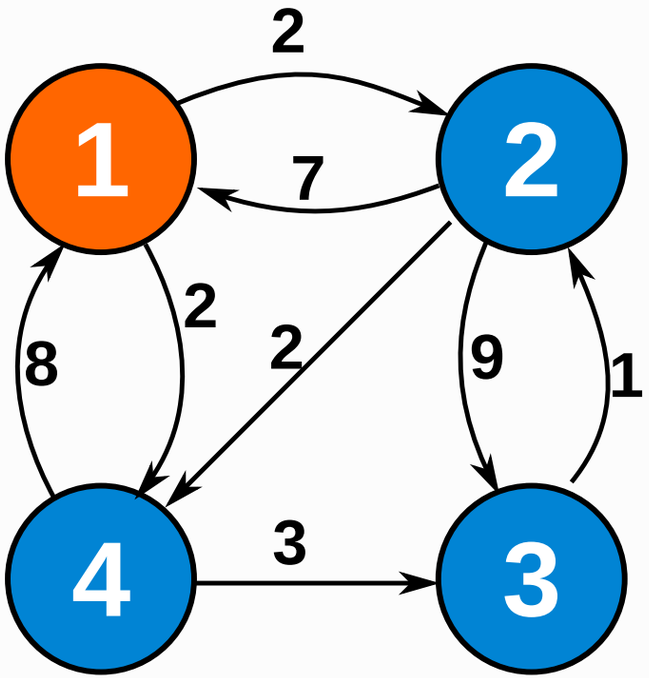
ALGORITMO DE FLOYD



	1	2	3	4
1	0	2	∞	2
2	7	0	9	2
3	∞	1	0	∞
4	8	∞	3	0

TOMO UN VERTICE V0 Y OTRO PAR DE VERTICES V1 Y V2.
ME QUEDO CON LA MENOR DISTANCIA ENTRE V1 ⇒ V2 Y V1 ⇒ V0 ⇒ V2.

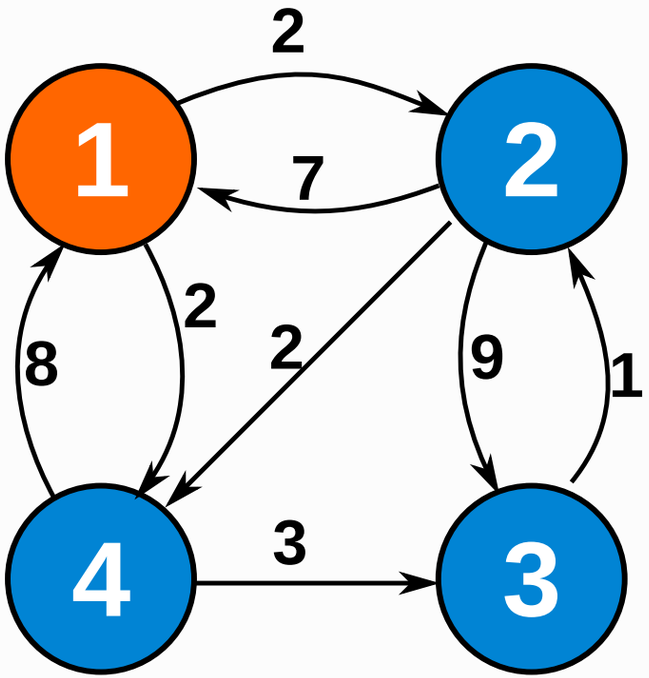
ALGORITMO DE FLOYD



	1	2	3	4
1	0	2	∞	2
2	7	0	9	2
3	∞	1	0	∞
4	8	∞	3	0

COMO 1 ES NUESTRO VERTICE INTERMEDIO, NO ME INTERESAN LAS ARISTAS QUE SALEN O LLEGAN DE EL.

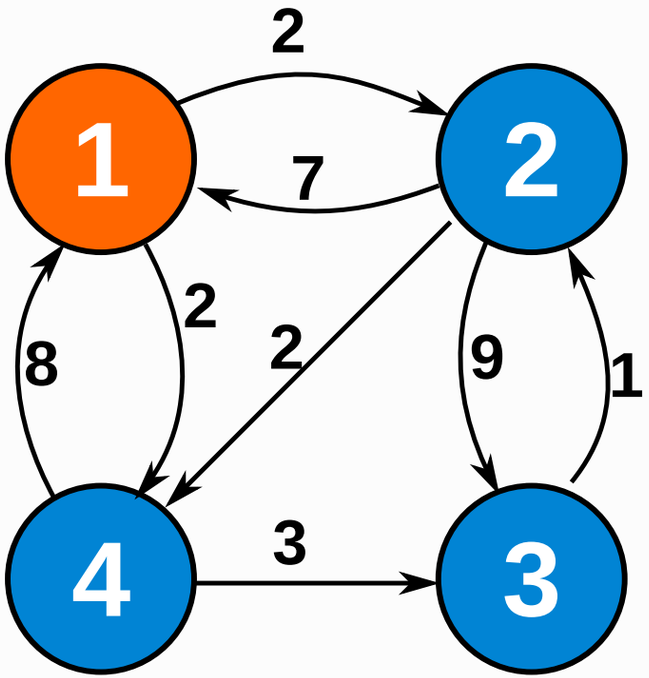
ALGORITMO DE FLOYD



	1	2	3	4
1	0	2	∞	2
2	7	0	9	2
3	∞	1	0	∞
4	8	∞	3	0

¿2 ⇒ 1 ⇒ 3 < 2 ⇒ 3?

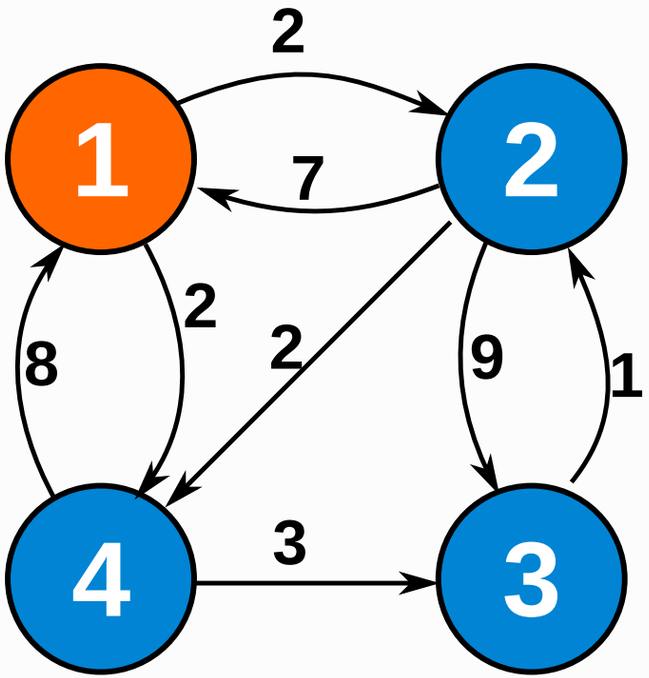
ALGORITMO DE FLOYD



	1	2	3	4
1	0	2	∞	2
2	7	0	9	2
3	∞	1	0	∞
4	8	∞	3	0

¿2 ⇒ 1 ⇒ 4 < 2 ⇒ 4?

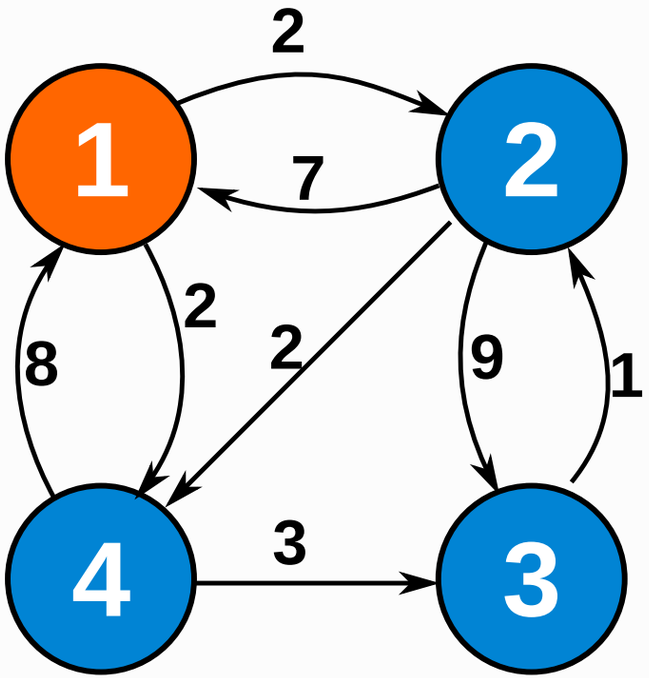
ALGORITMO DE FLOYD



	1	2	3	4
1	0	2	∞	2
2	7	0	9	2
3	∞	1	0	∞
4	8	∞	3	0

¿3 ⇒ 1 ⇒ 2 < 3 ⇒ 2?

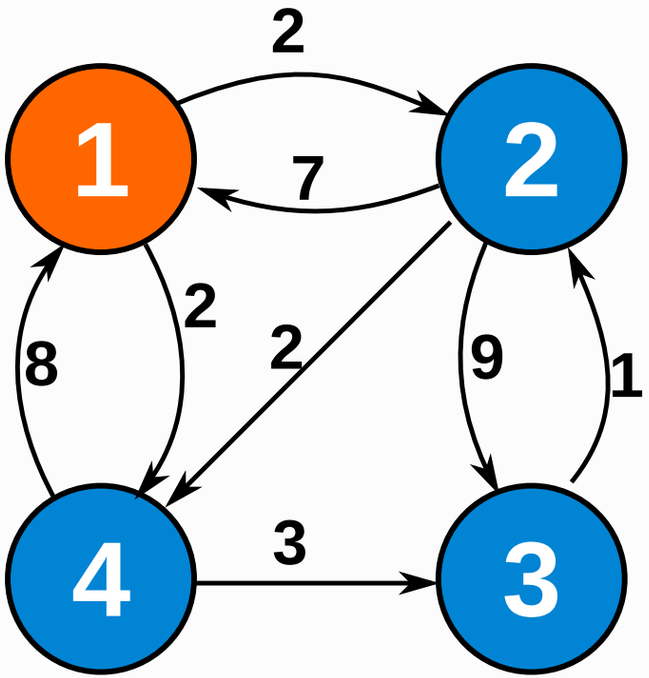
ALGORITMO DE FLOYD



	1	2	3	4
1	0	2	∞	2
2	7	0	9	2
3	∞	1	0	∞
4	8	∞	3	0

¿3 ⇒ 1 ⇒ 4 < 3 ⇒ 4?

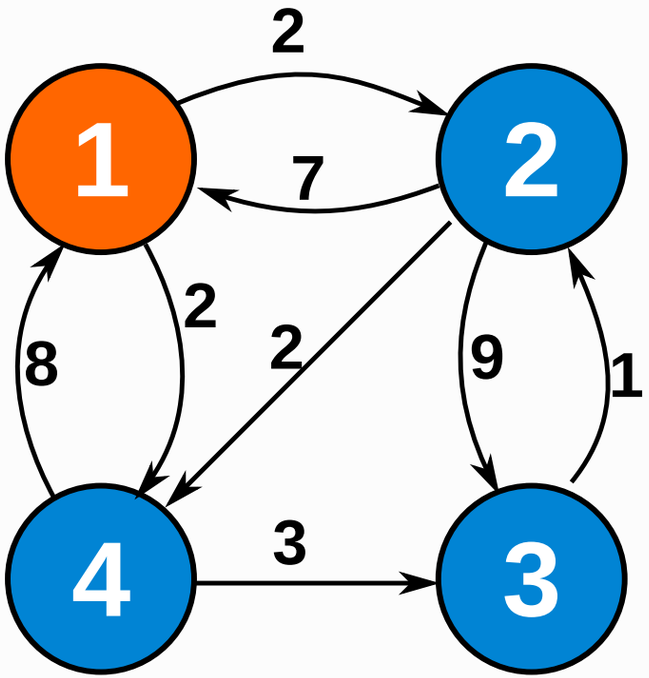
ALGORITMO DE FLOYD



	1	2	3	4
1	0	2	∞	2
2	7	0	9	2
3	∞	1	0	∞
4	8	∞	3	0

¿4 ⇒ 1 ⇒ 2 < 4 ⇒ 2?

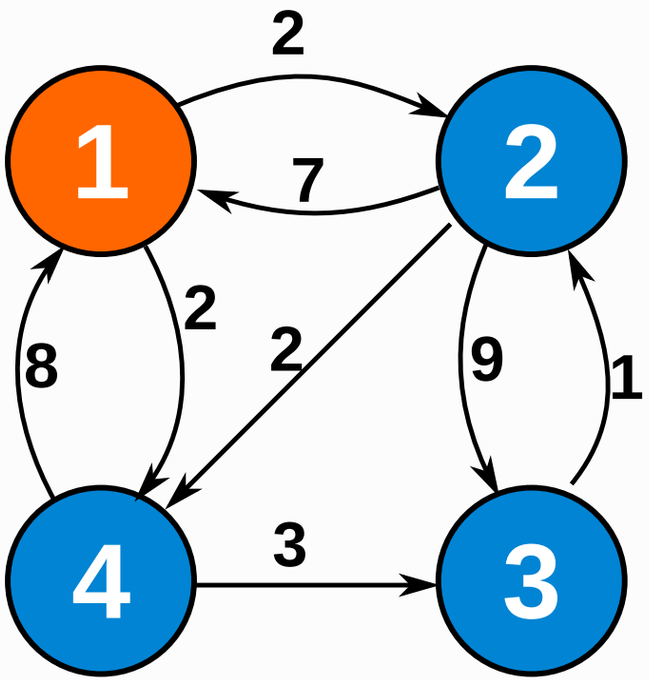
ALGORITMO DE FLOYD



	1	2	3	4
1	0	2	∞	2
2	7	0	9	2
3	∞	1	0	∞
4	8	10	3	0

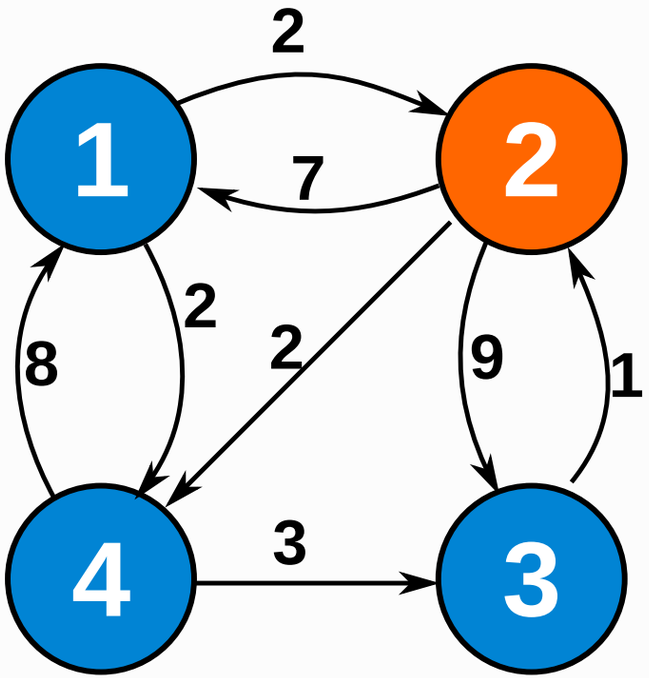
¿4 ⇒ 1 ⇒ 3 < 4 ⇒ 3?

ALGORITMO DE FLOYD



	1	2	3	4
1	0	2	∞	2
2	7	0	9	2
3	∞	1	0	∞
4	8	10	3	0

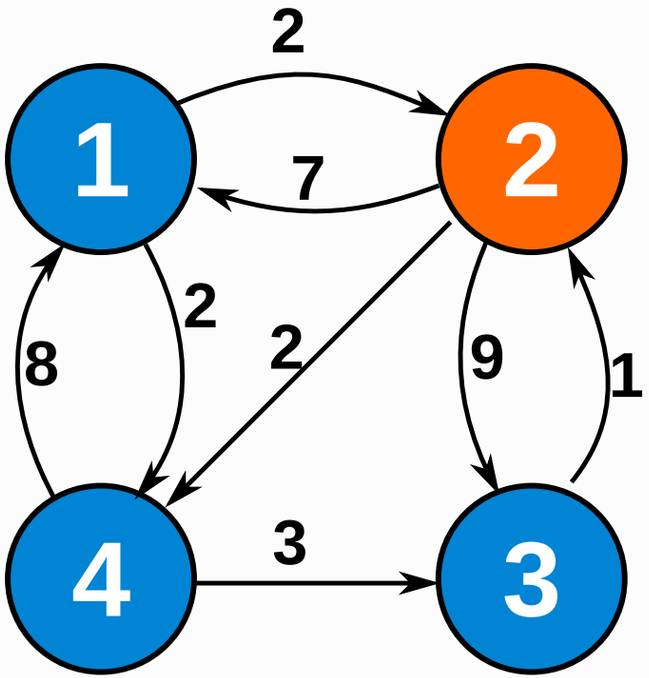
ALGORITMO DE FLOYD



	1	2	3	4
1	0	2	∞	2
2	7	0	9	2
3	∞	1	0	∞
4	8	10	3	0

¿1 ⇒ 2 ⇒ 3 < 1 ⇒ 3?

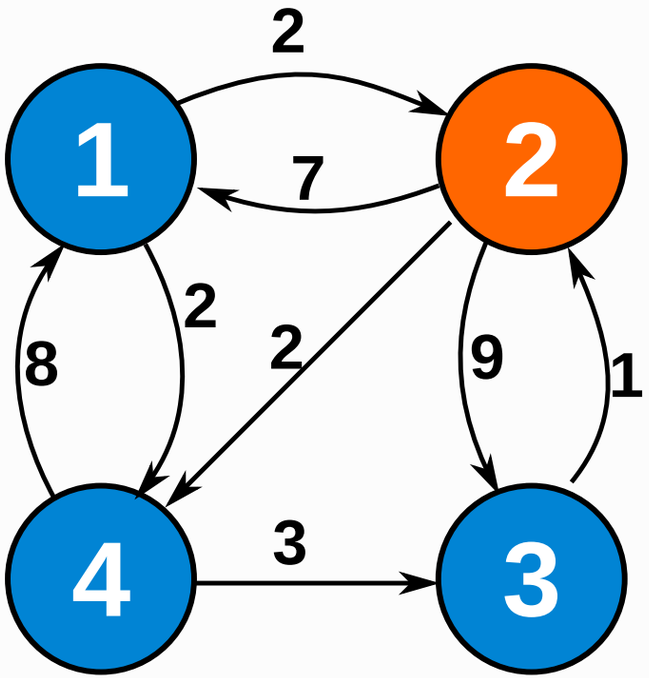
ALGORITMO DE FLOYD



	1	2	3	4
1	0	2	11	2
2	7	0	9	2
3	∞	1	0	∞
4	8	10	3	0

¿1 ⇒ 2 ⇒ 4 < 1 ⇒ 4?

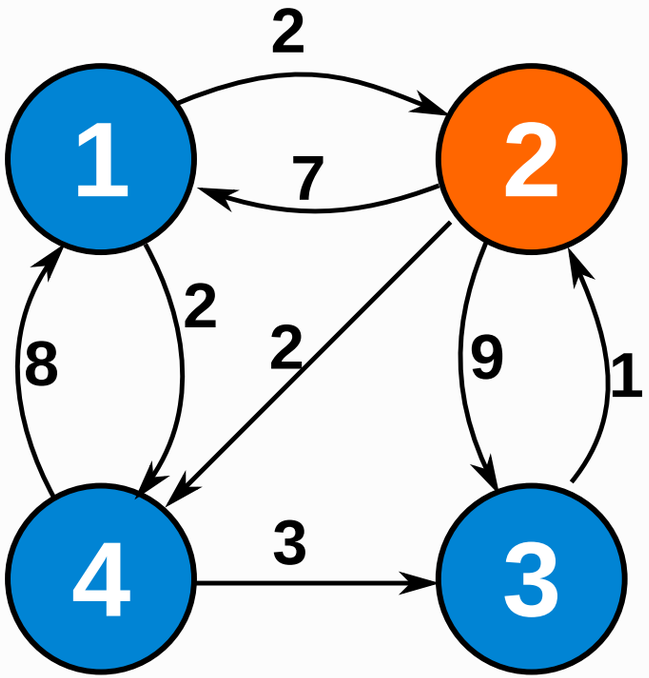
ALGORITMO DE FLOYD



	1	2	3	4
1	0	2	11	2
2	7	0	9	2
3	∞	1	0	∞
4	8	10	3	0

¿3 ⇒ 2 ⇒ 1 < 3 ⇒ 1?

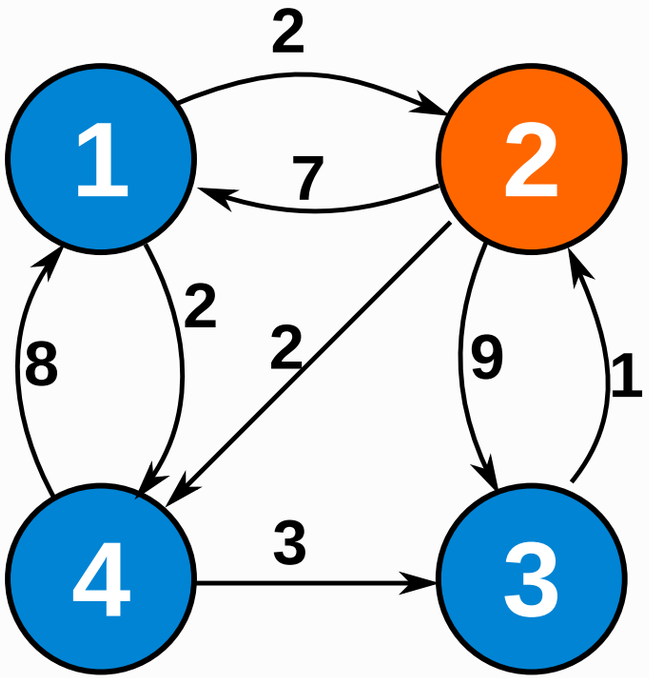
ALGORITMO DE FLOYD



	1	2	3	4
1	0	2	11	2
2	7	0	9	2
3	8	1	0	∞
4	8	10	3	0

¿3 ⇒ 2 ⇒ 4 < 3 ⇒ 4?

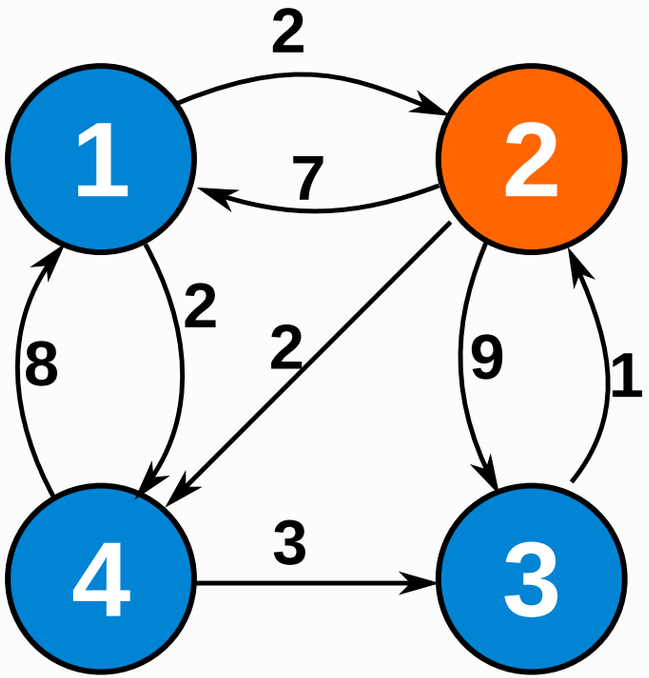
ALGORITMO DE FLOYD



	1	2	3	4
1	0	2	11	2
2	7	0	9	2
3	8	1	0	3
4	8	10	3	0

¿4 ⇒ 2 ⇒ 1 < 4 ⇒ 1?

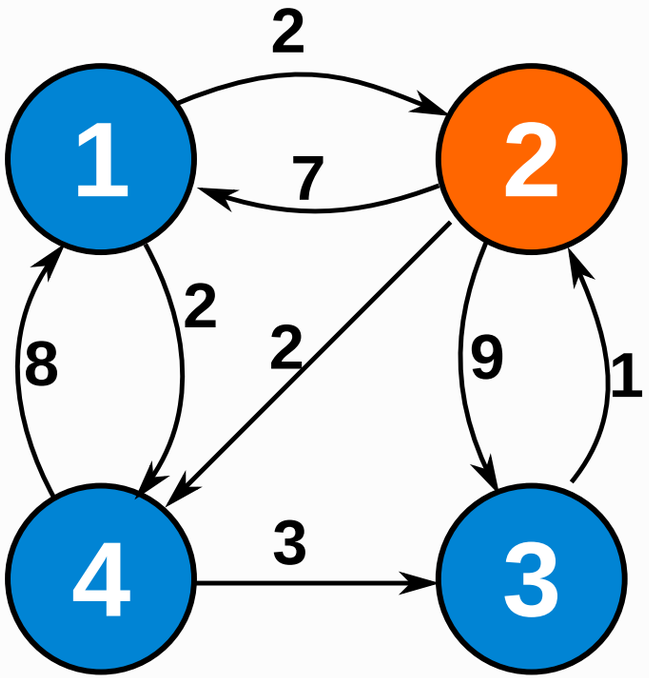
ALGORITMO DE FLOYD



	1	2	3	4
1	0	2	11	2
2	7	0	9	2
3	8	1	0	3
4	8	10	3	0

¿4 ⇒ 2 ⇒ 3 < 4 ⇒ 3?

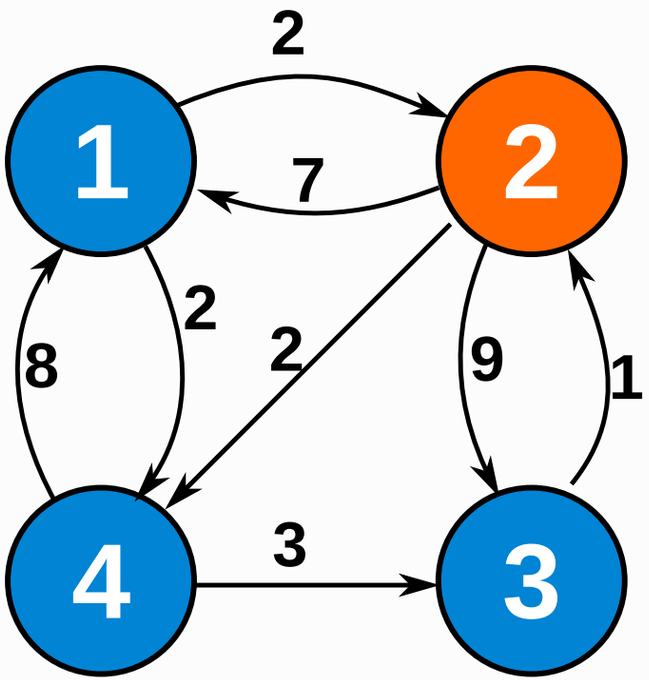
ALGORITMO DE FLOYD



	1	2	3	4
1	0	2	11	2
2	7	0	9	2
3	8	1	0	3
4	8	10	3	0

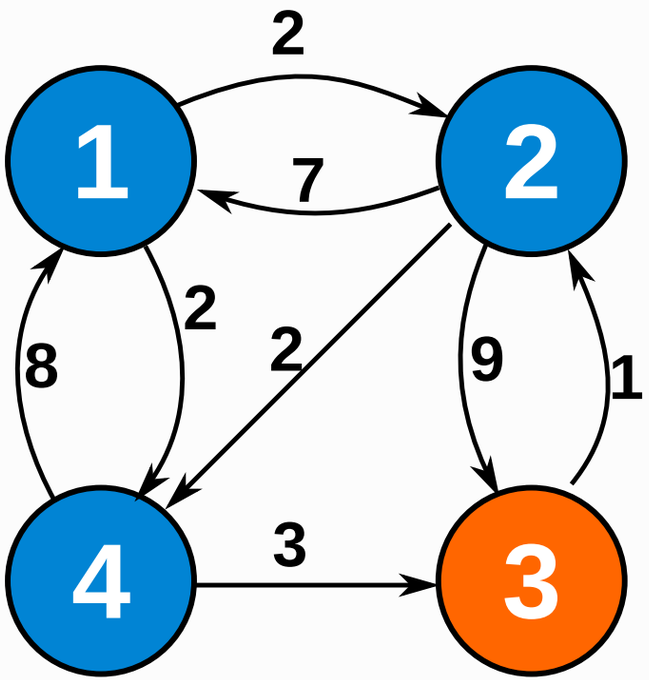
¿4 ⇒ 2 ⇒ 3 < 4 ⇒ 3?

ALGORITMO DE FLOYD



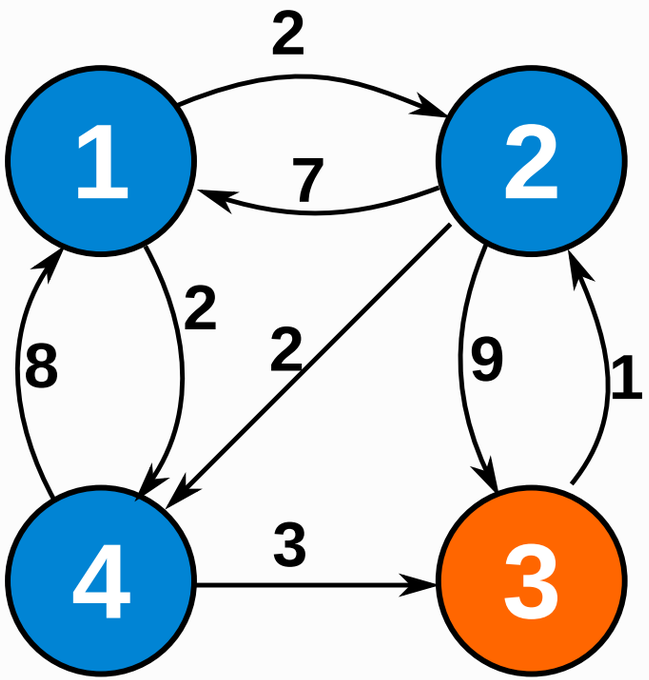
	1	2	3	4
1	0	2	11	2
2	7	0	9	2
3	8	1	0	3
4	8	10	3	0

ALGORITMO DE FLOYD



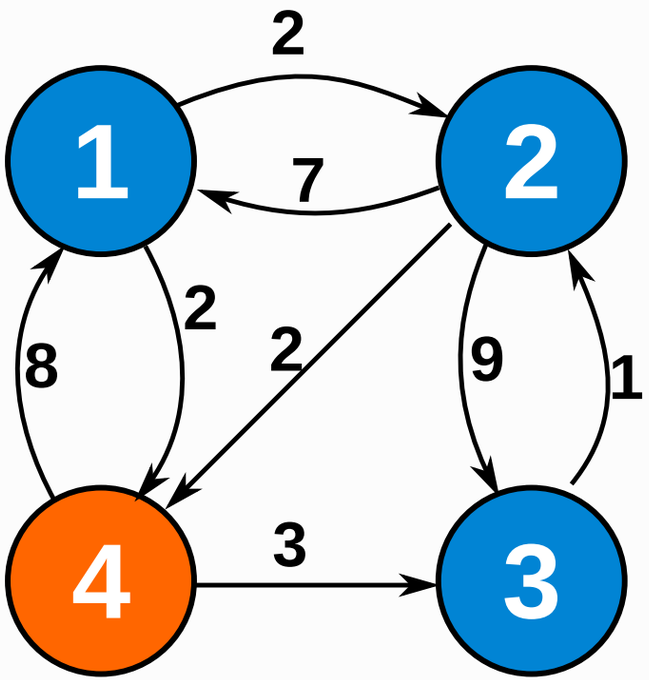
	1	2	3	4
1	0	2	11	2
2	7	0	9	2
3	8	1	0	3
4	8	10	3	0

ALGORITMO DE FLOYD



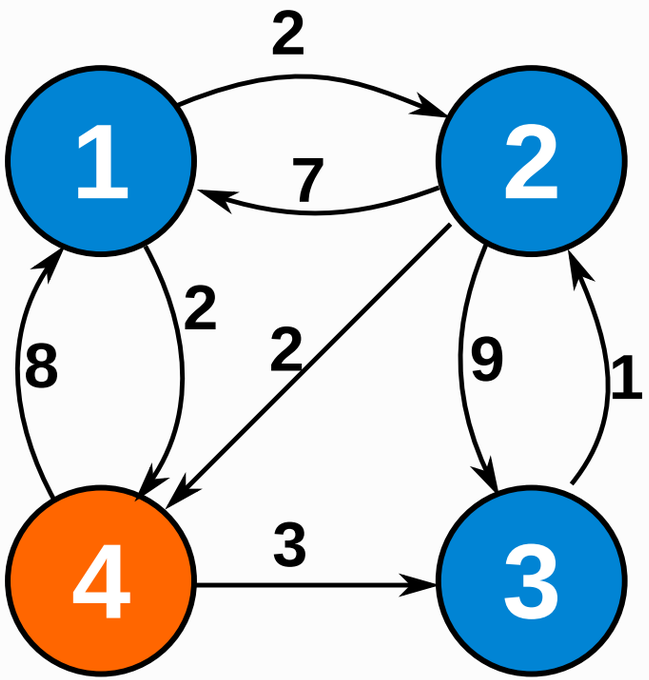
	1	2	3	4
1	0	2	11	2
2	7	0	9	2
3	8	1	0	3
4	8	4	3	0

ALGORITMO DE FLOYD



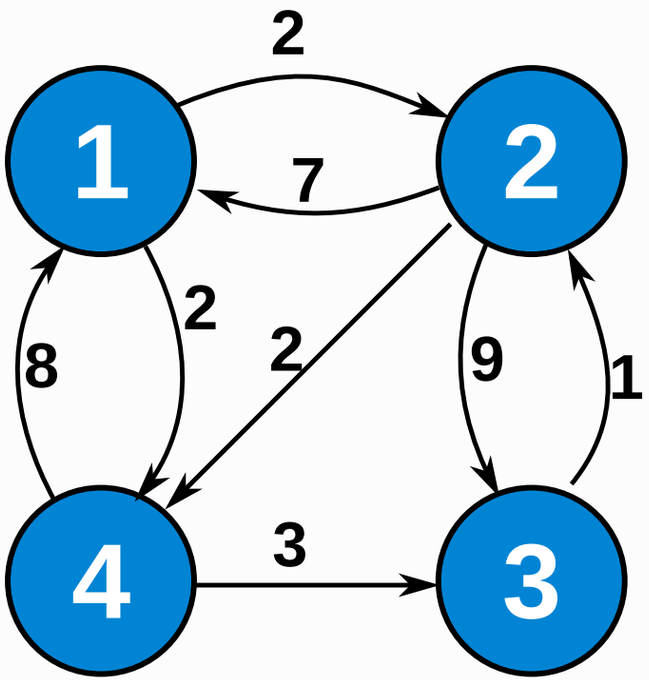
	1	2	3	4
1	0	2	11	2
2	7	0	9	2
3	8	1	0	3
4	8	4	3	0

ALGORITMO DE FLOYD



	1	2	3	4
1	0	2	5	2
2	7	0	5	2
3	8	1	0	3
4	8	4	3	0

ALGORITMO DE FLOYD

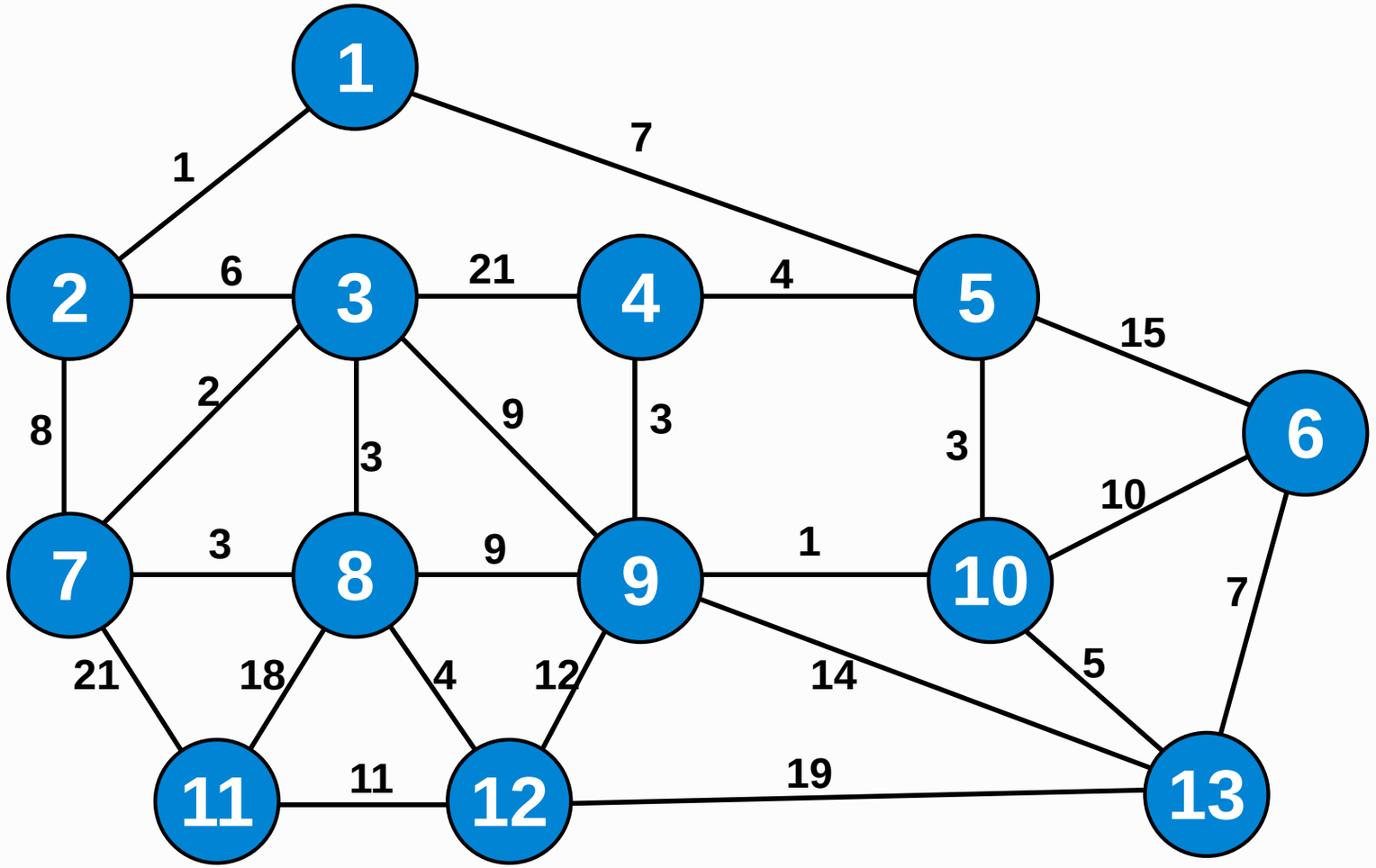


	1	2	3	4
1	0	2	5	2
2	7	0	5	2
3	8	1	0	3
4	8	4	3	0

FACULTAD
DE INGENIERIA
Universidad de Buenos Aires

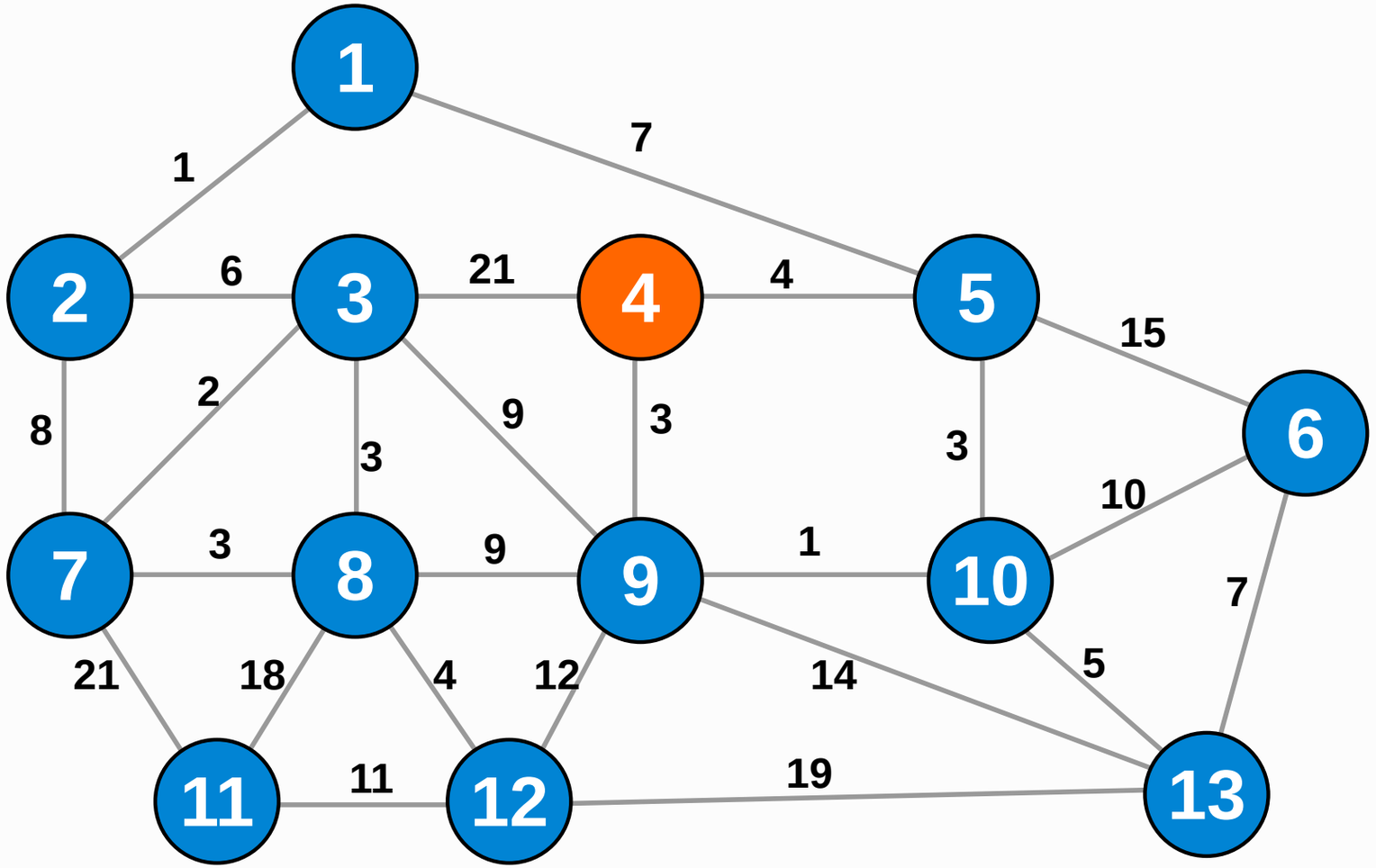
PRIM

ALGORITMO DE PRIM

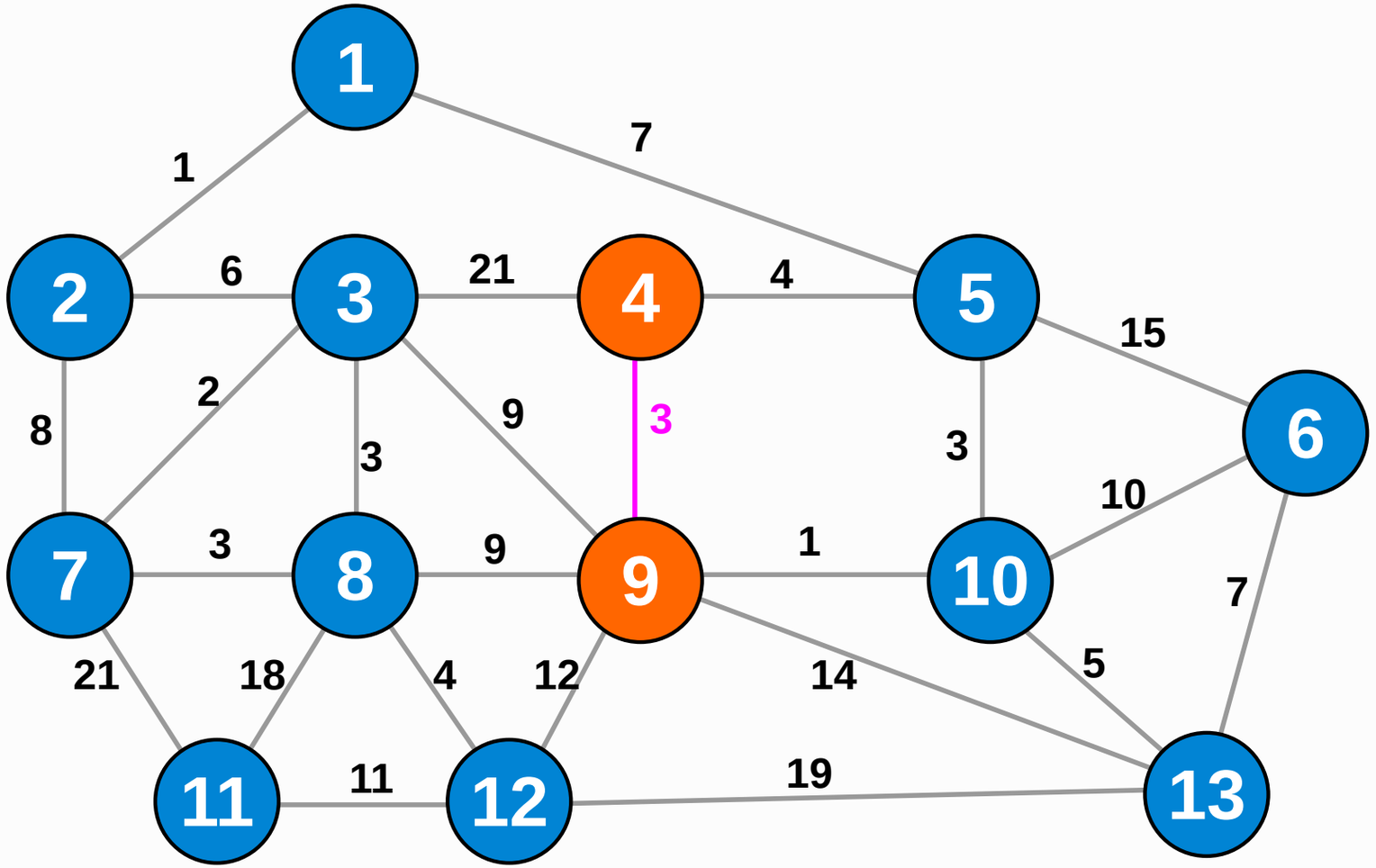


COMENZANDO POR UN VERTICE ARBITRARIO, MARCARLO COMO VISITADO E IR AGREGANDO LA ARISTA DE MENOR PESO QUE CONECTA UN VERTICE YA VISITADO CON UNO NO VISITADO.

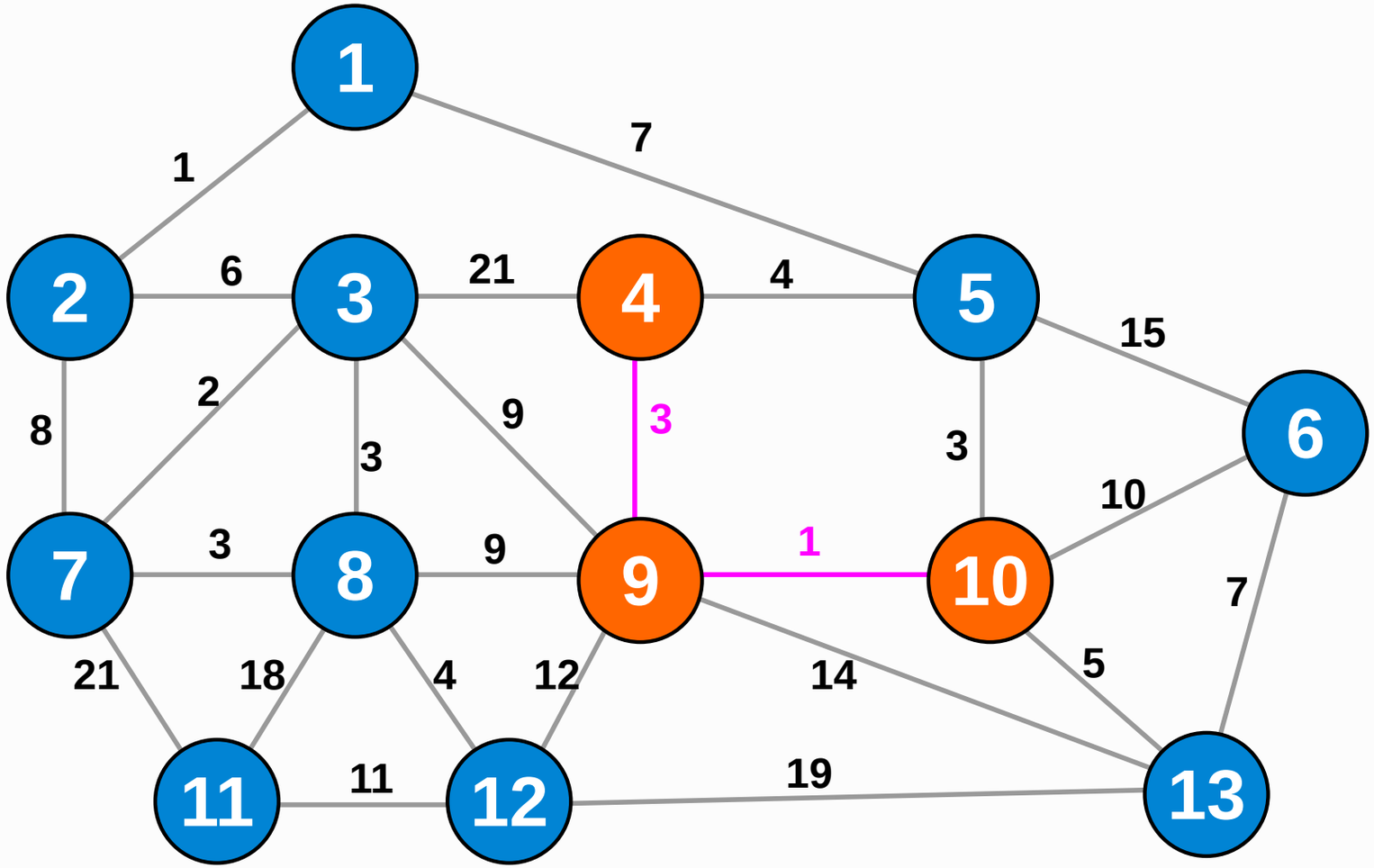
ALGORITMO DE PRIM



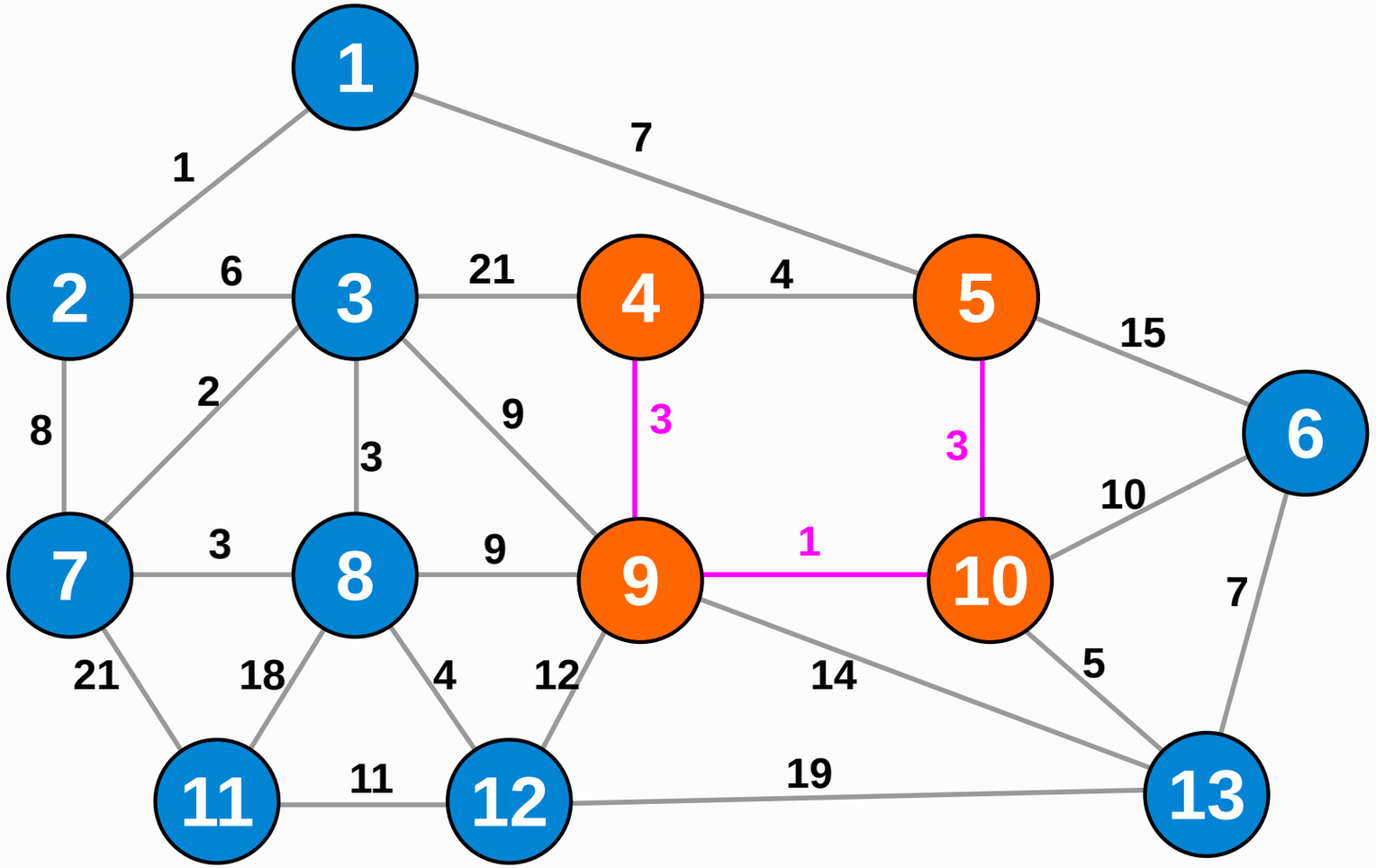
ALGORITMO DE PRIM



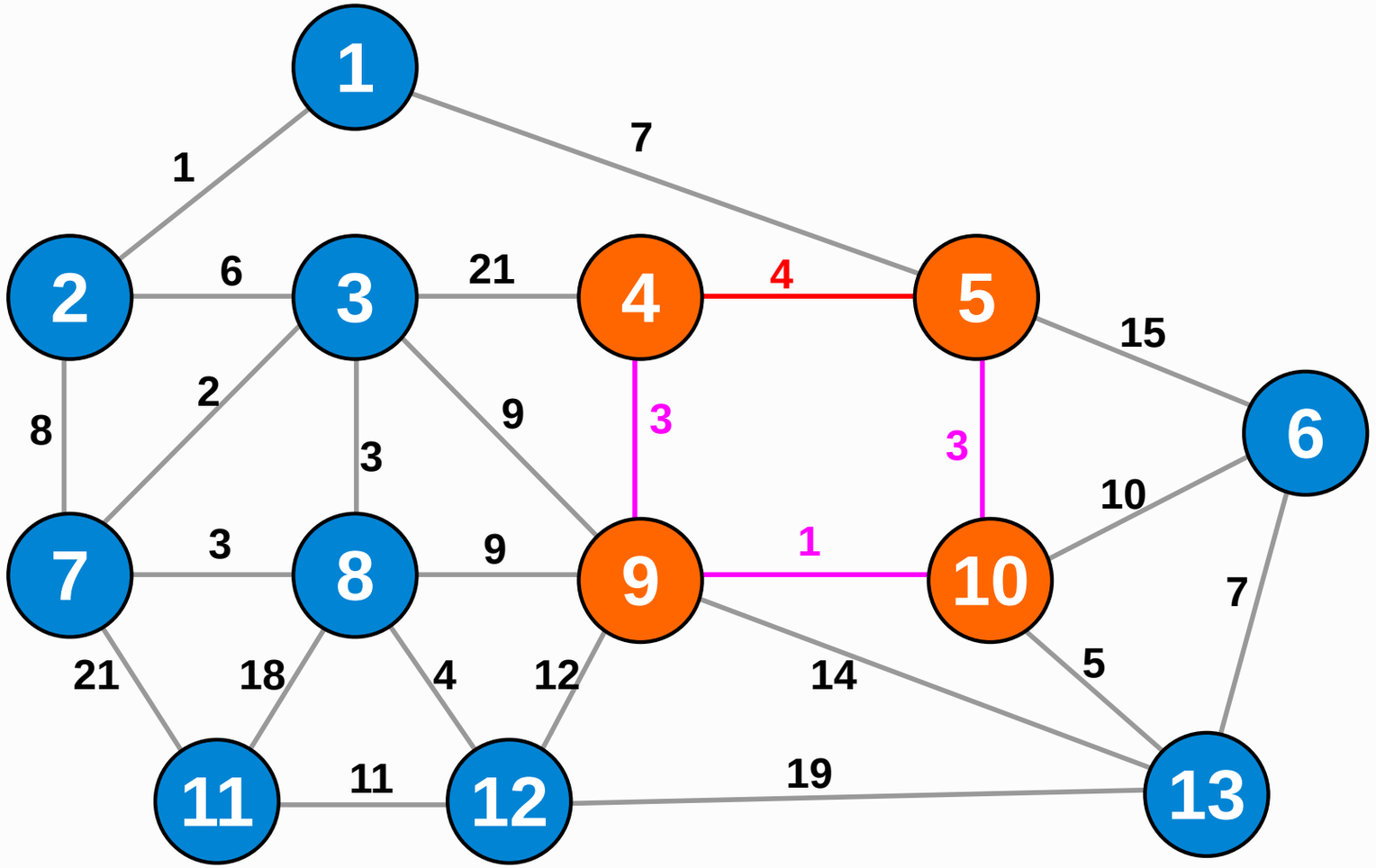
ALGORITMO DE PRIM



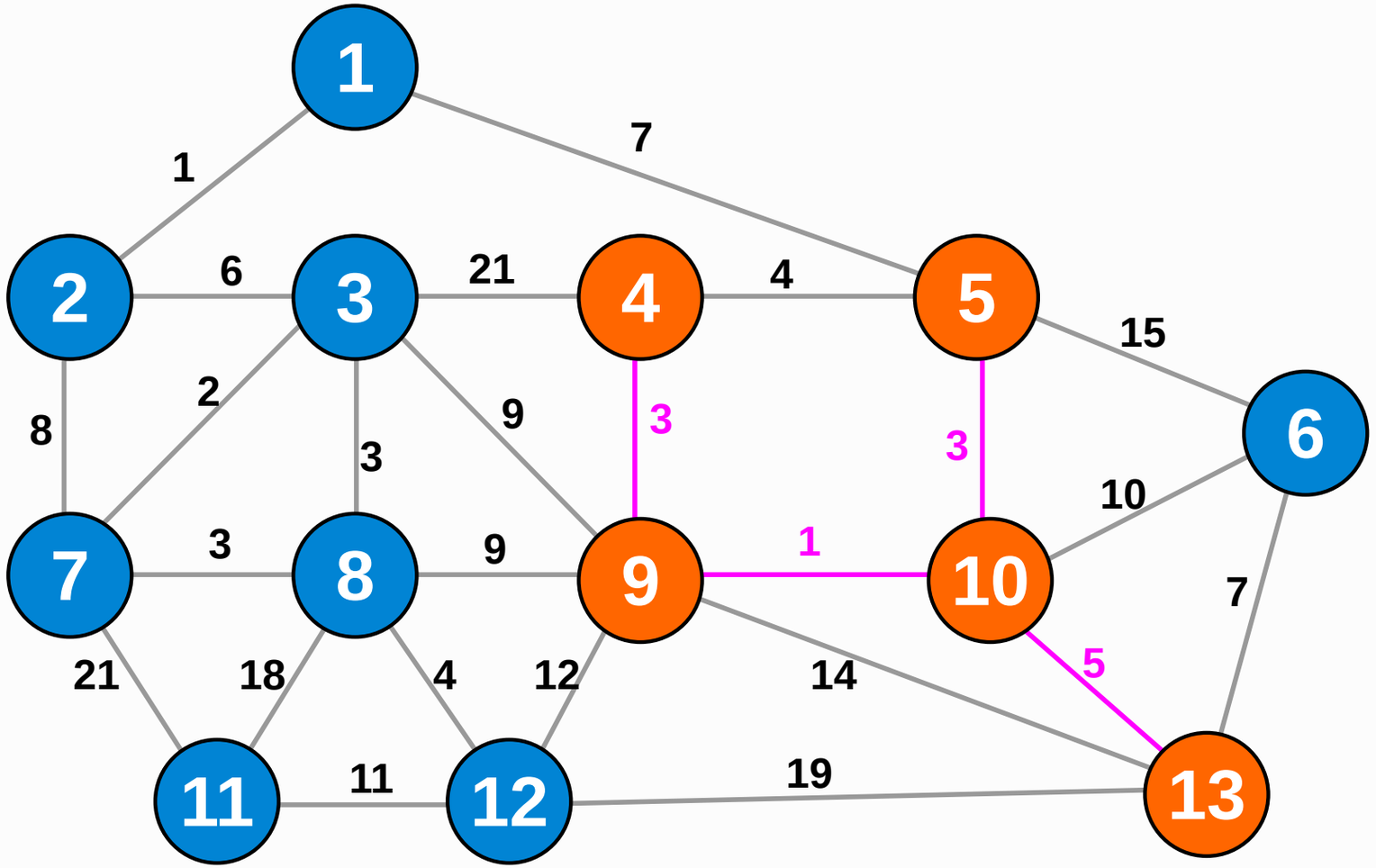
ALGORITMO DE PRIM



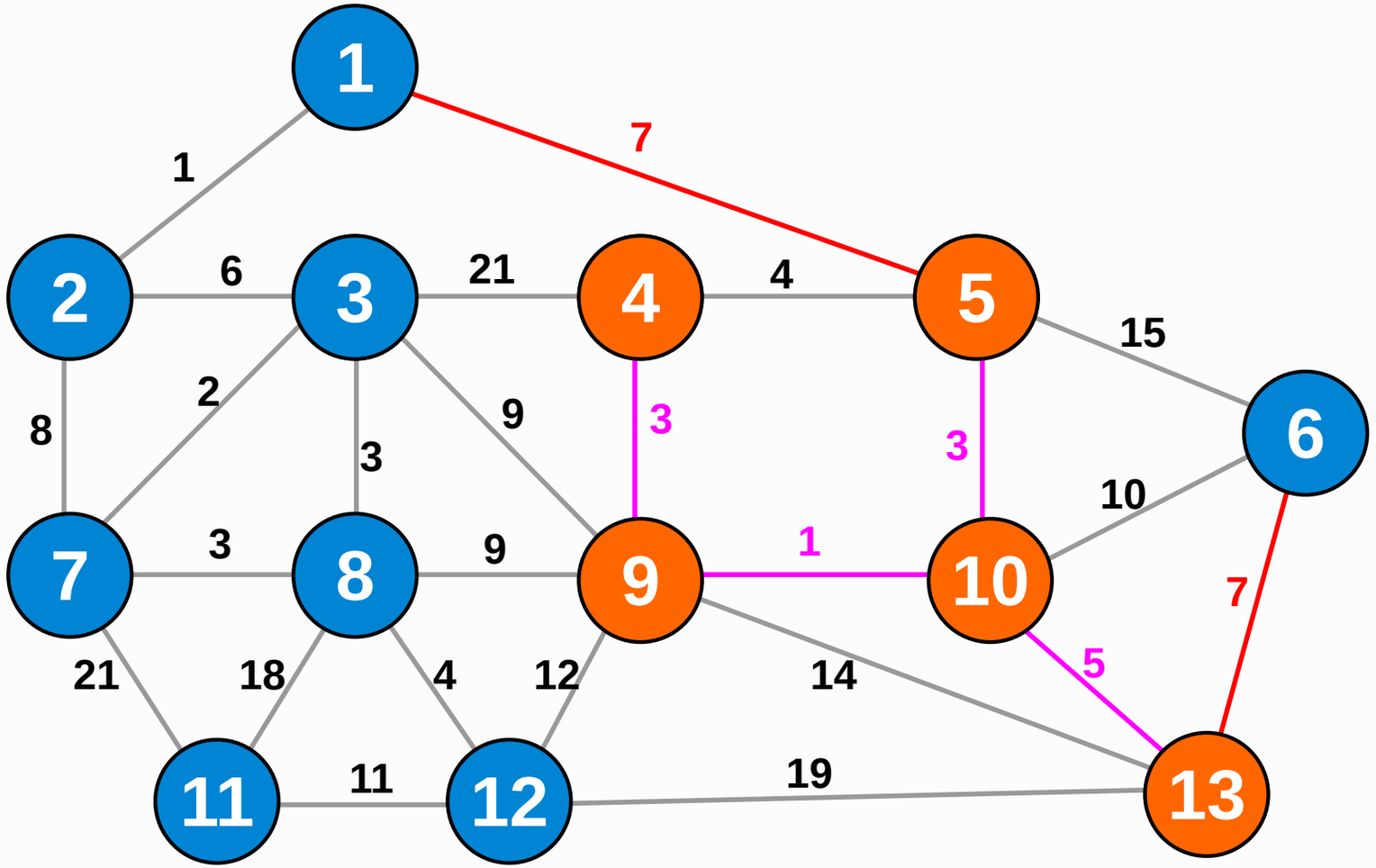
ALGORITMO DE PRIM



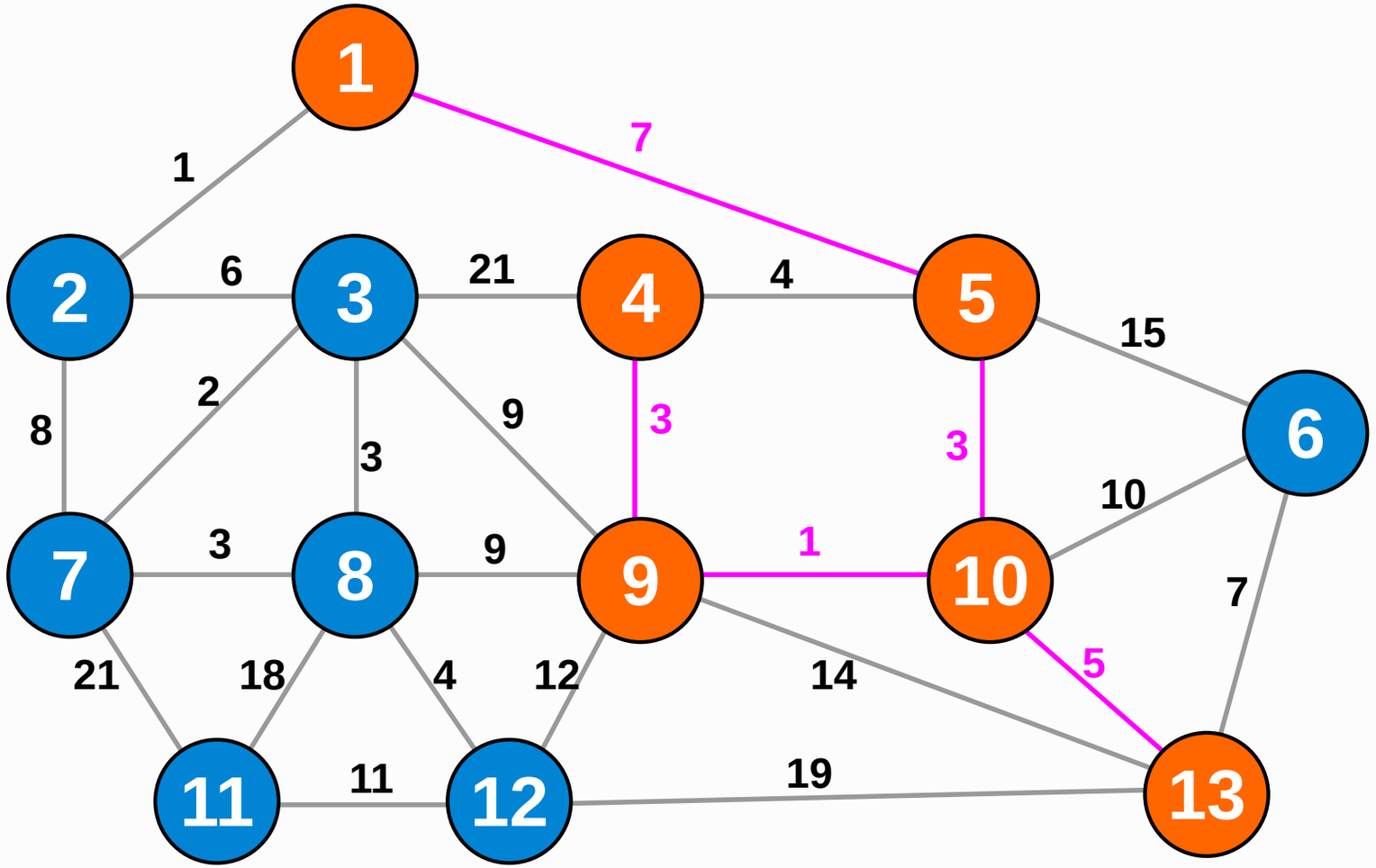
ALGORITMO DE PRIM



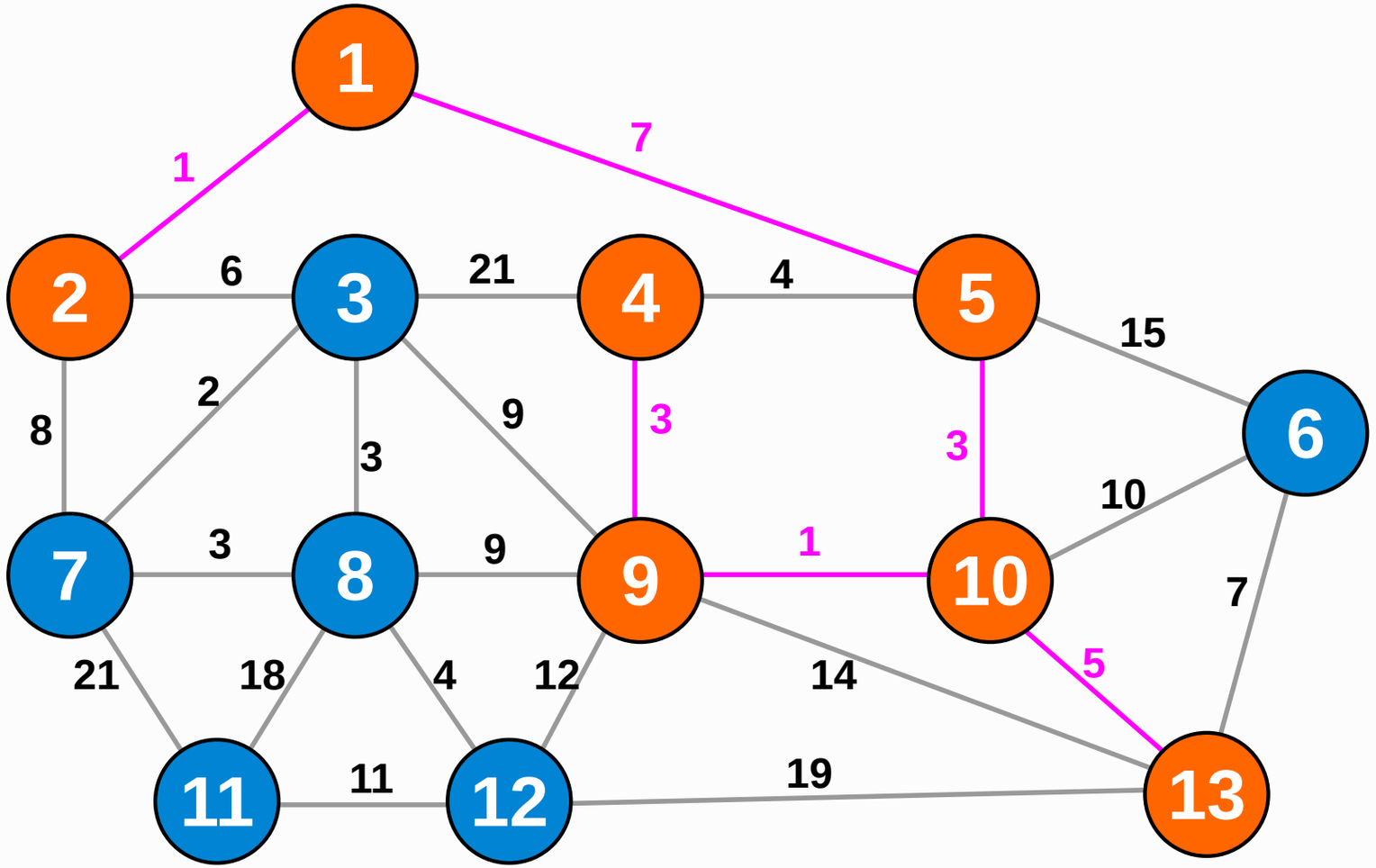
ALGORITMO DE PRIM



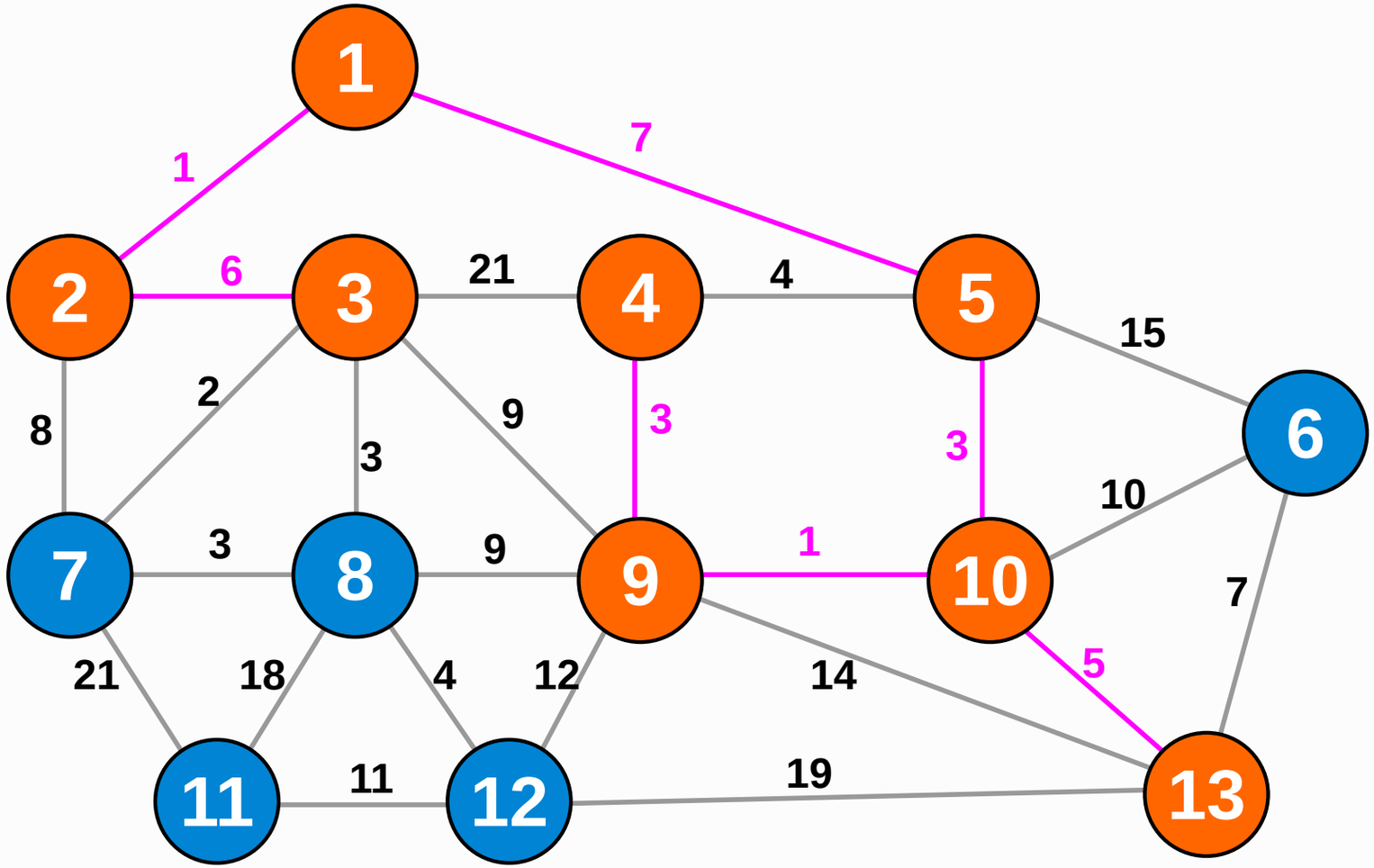
ALGORITMO DE PRIM



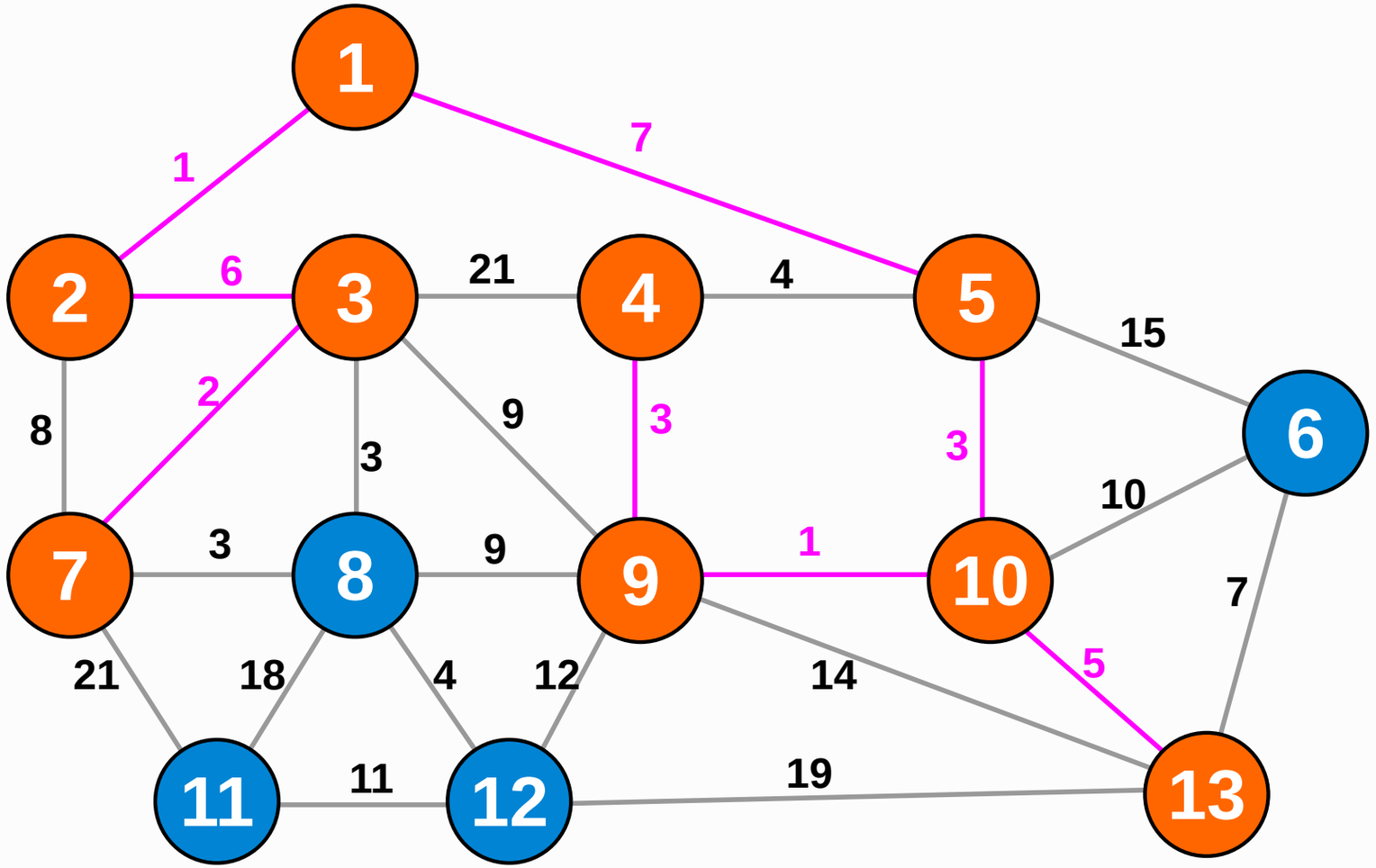
ALGORITMO DE PRIM



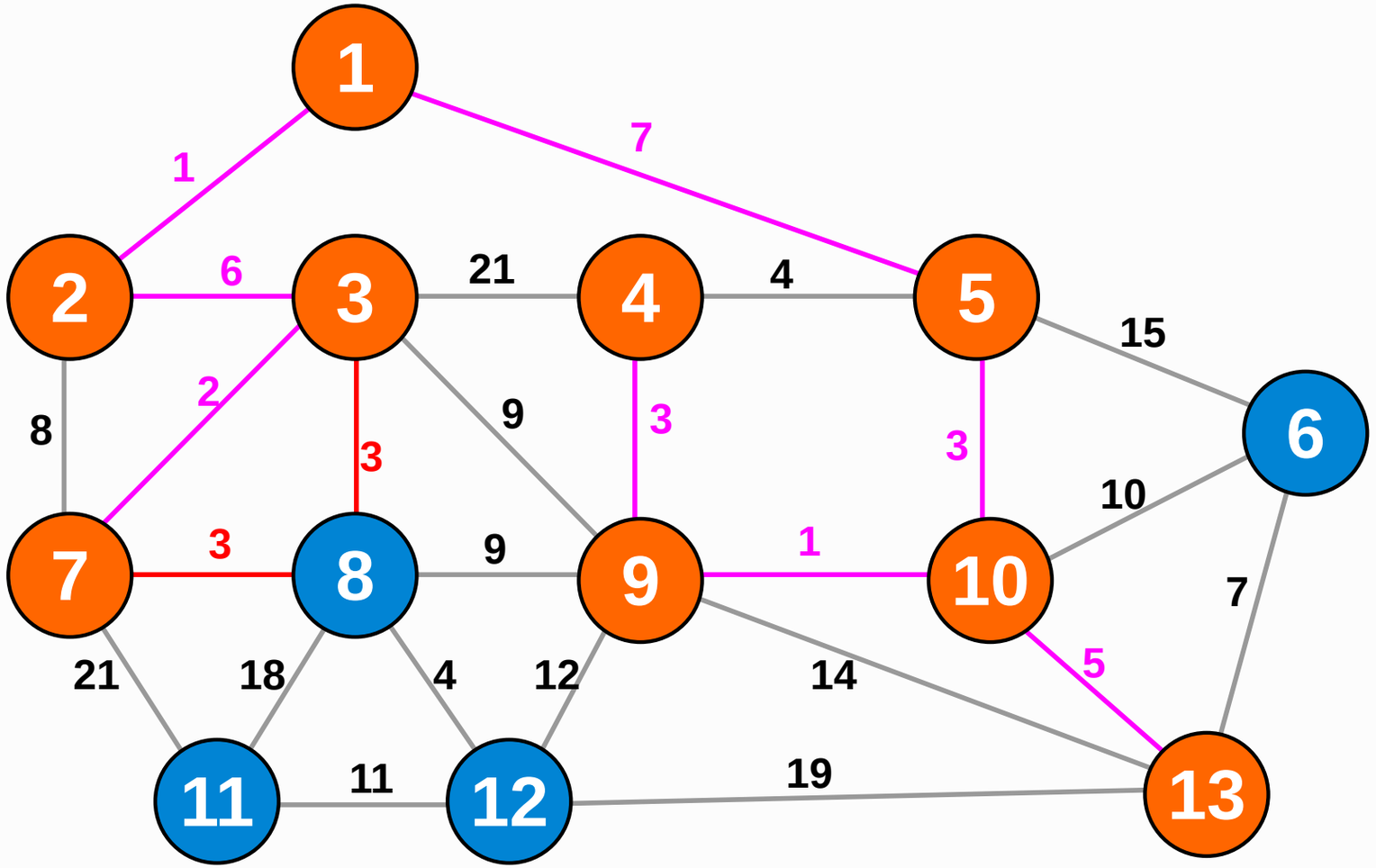
ALGORITMO DE PRIM



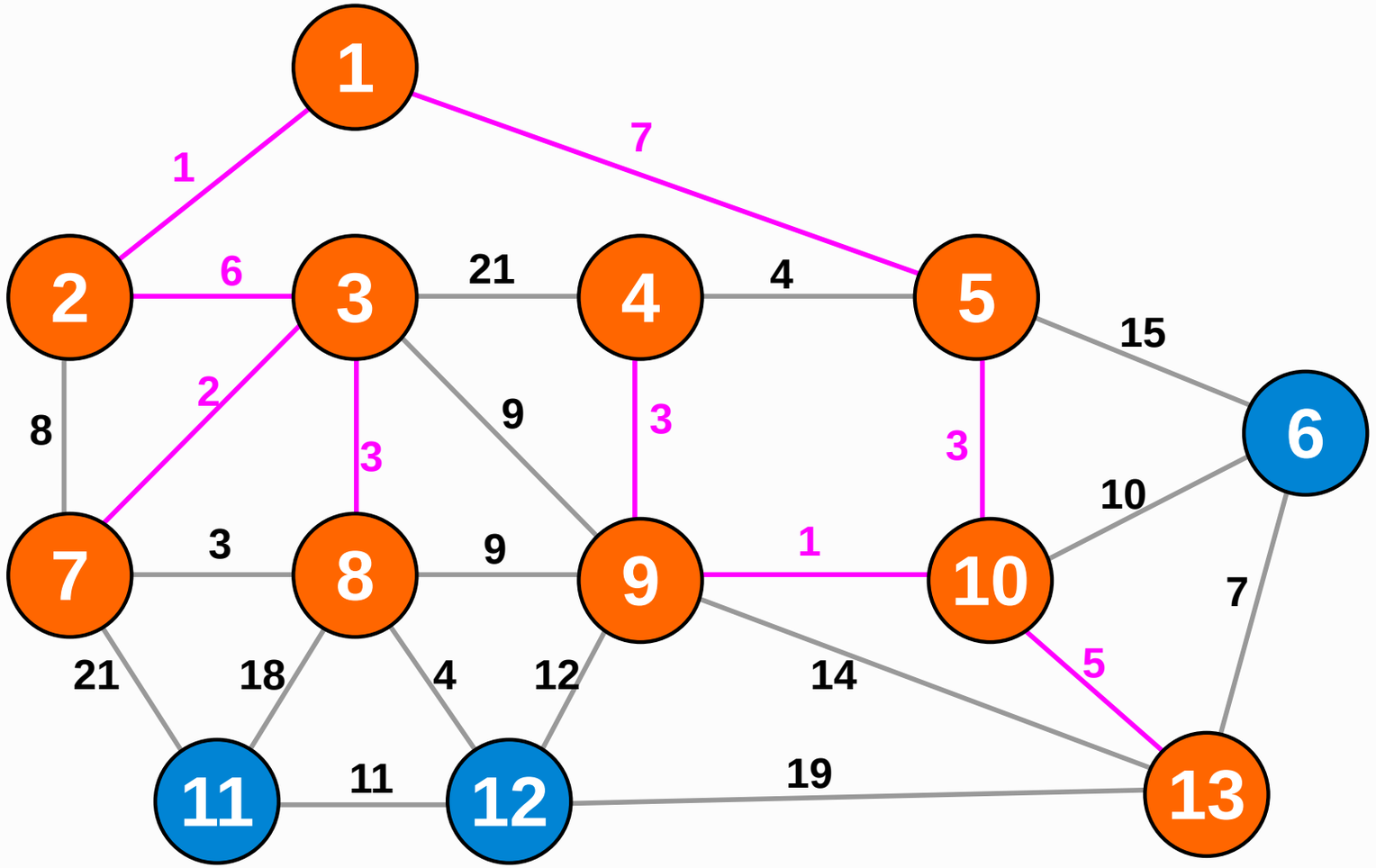
ALGORITMO DE PRIM



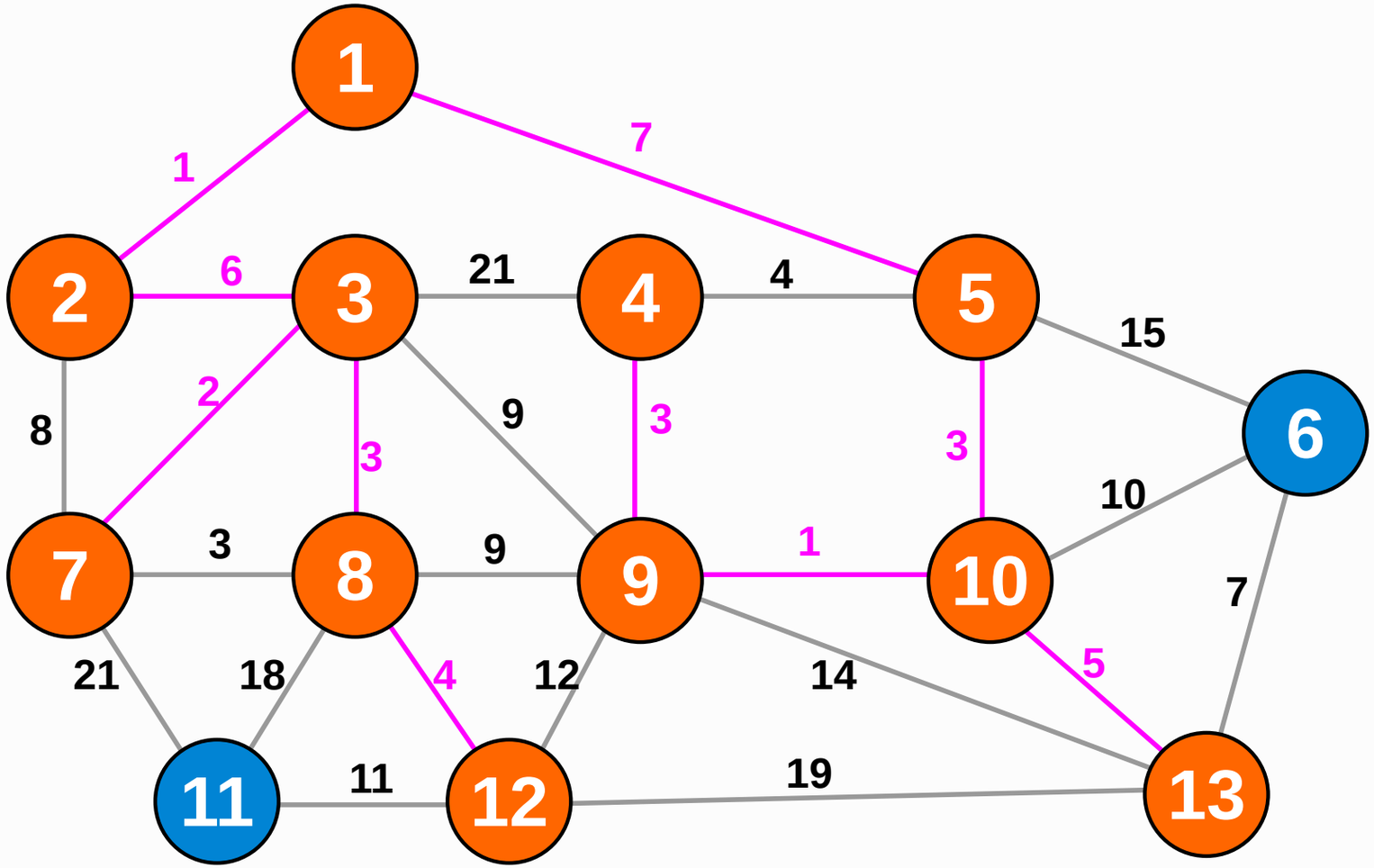
ALGORITMO DE PRIM



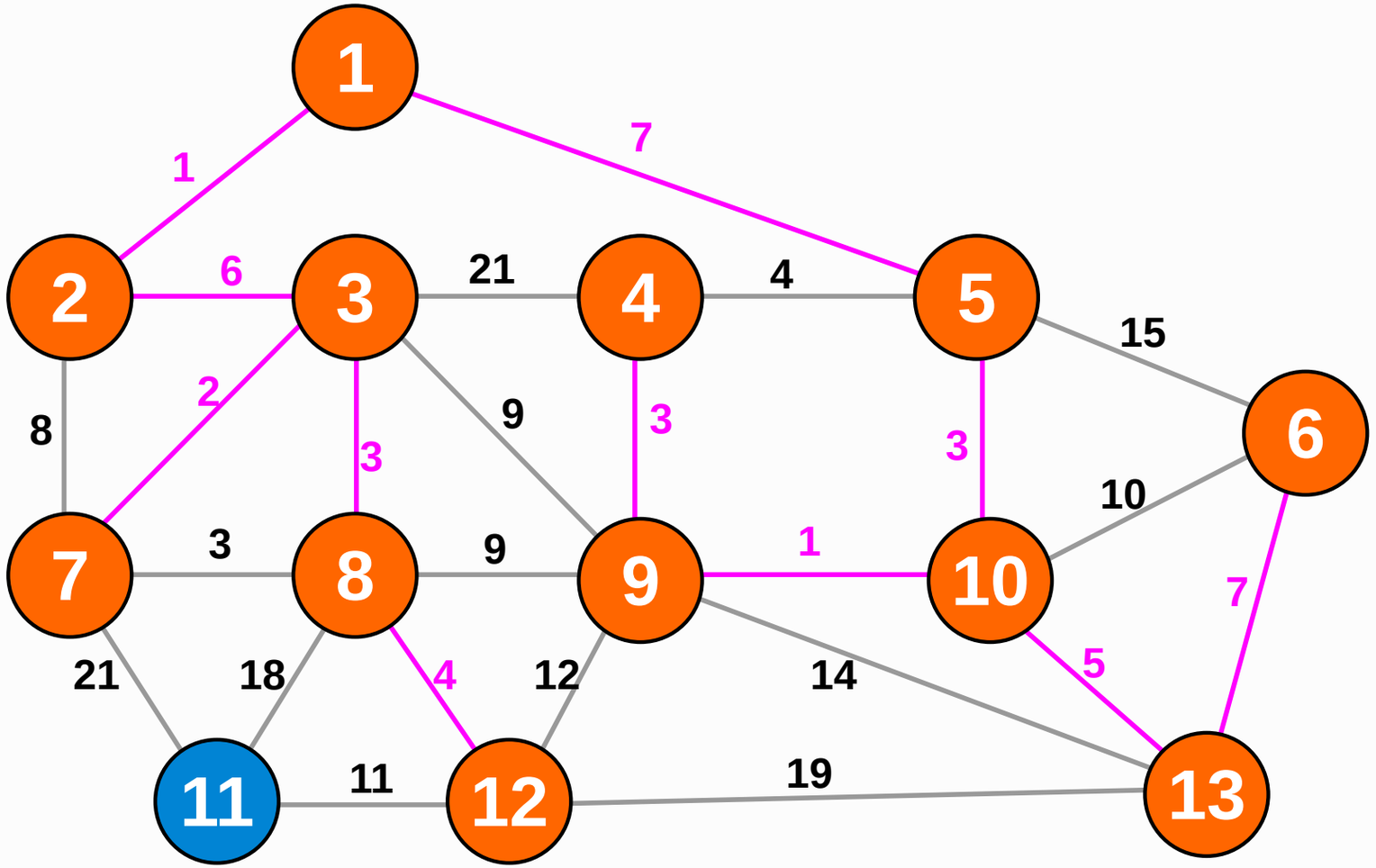
ALGORITMO DE PRIM



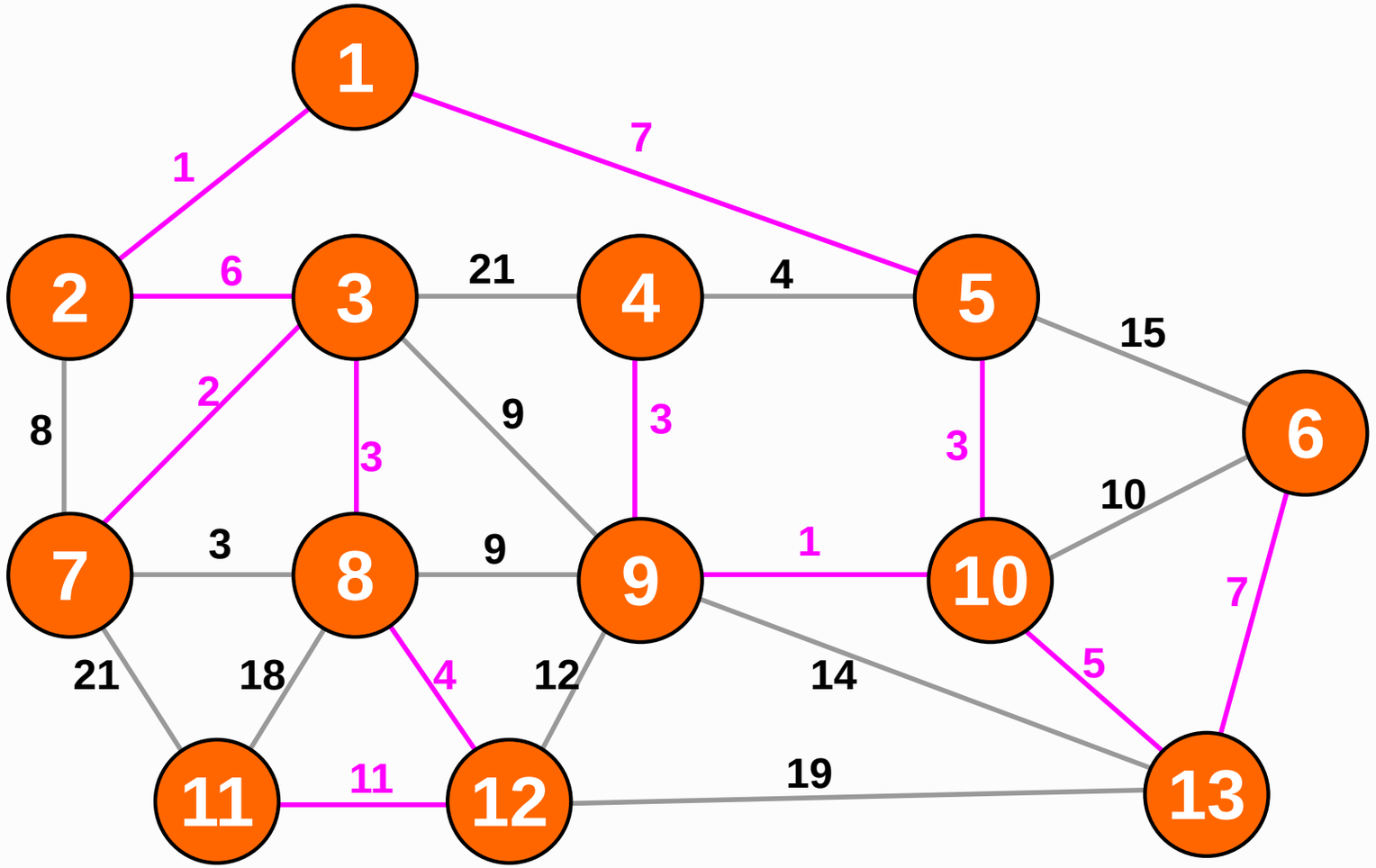
ALGORITMO DE PRIM



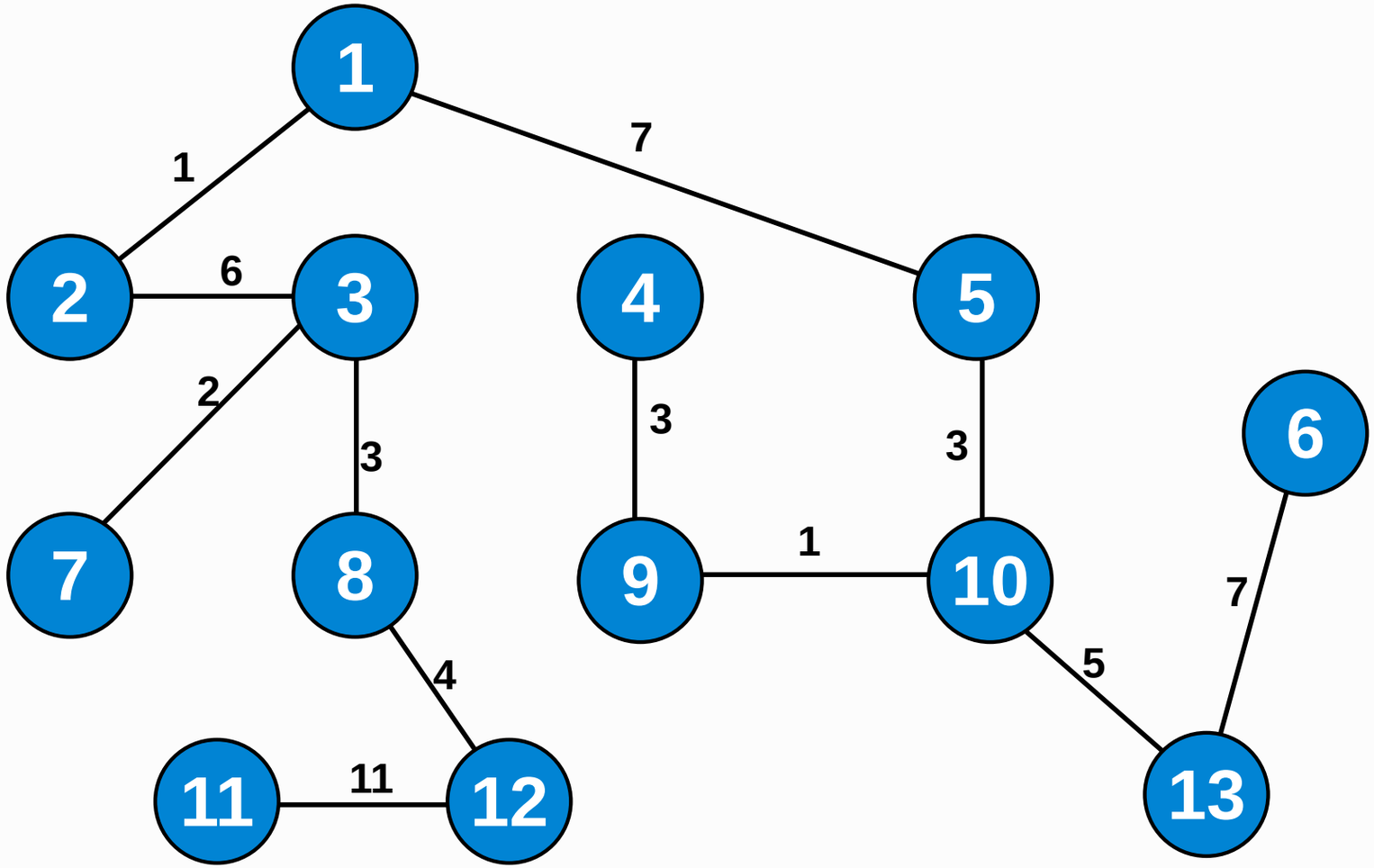
ALGORITMO DE PRIM



ALGORITMO DE PRIM



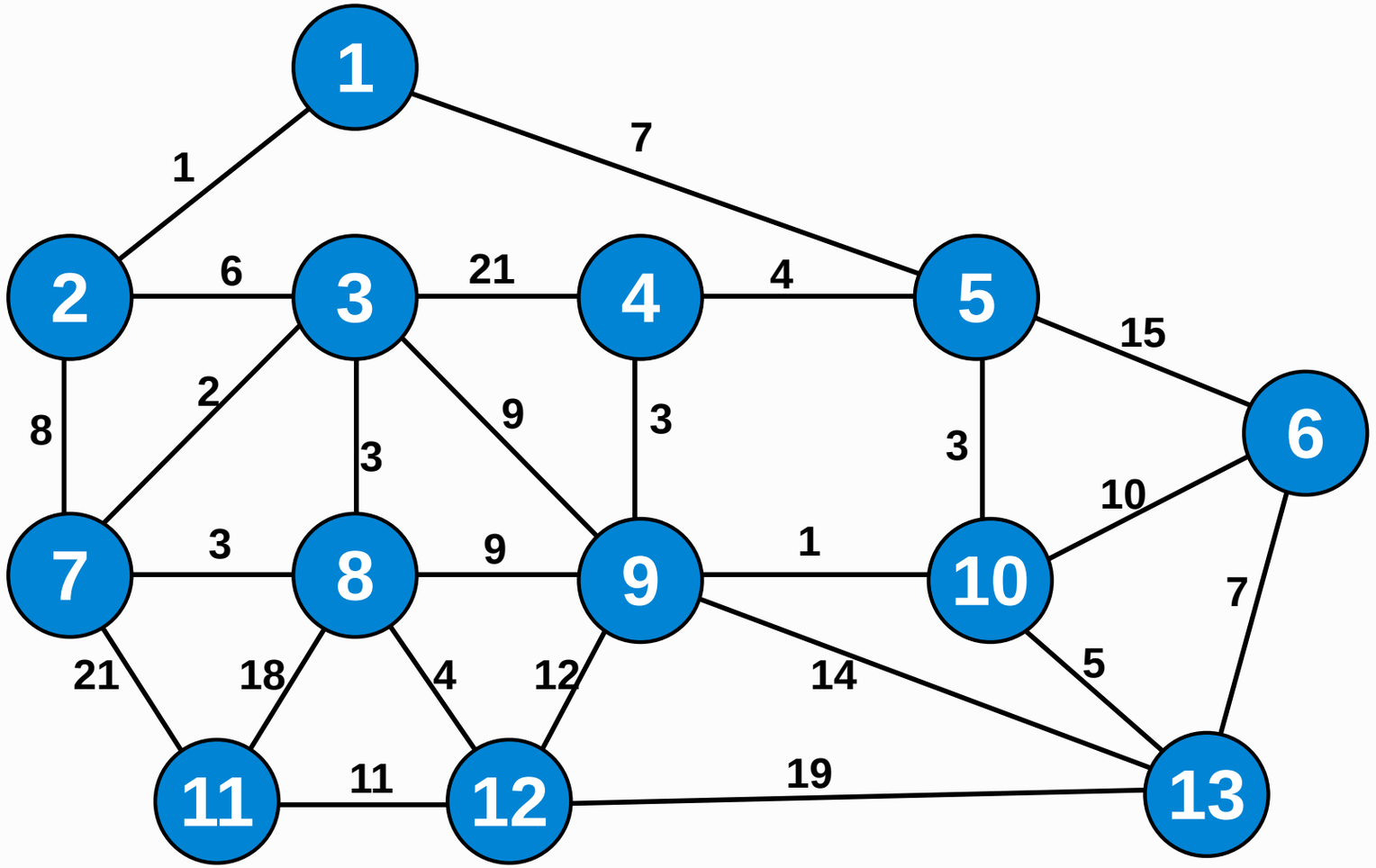
ALGORITMO DE PRIM



FACULTAD
DE INGENIERIA
Universidad de Buenos Aires

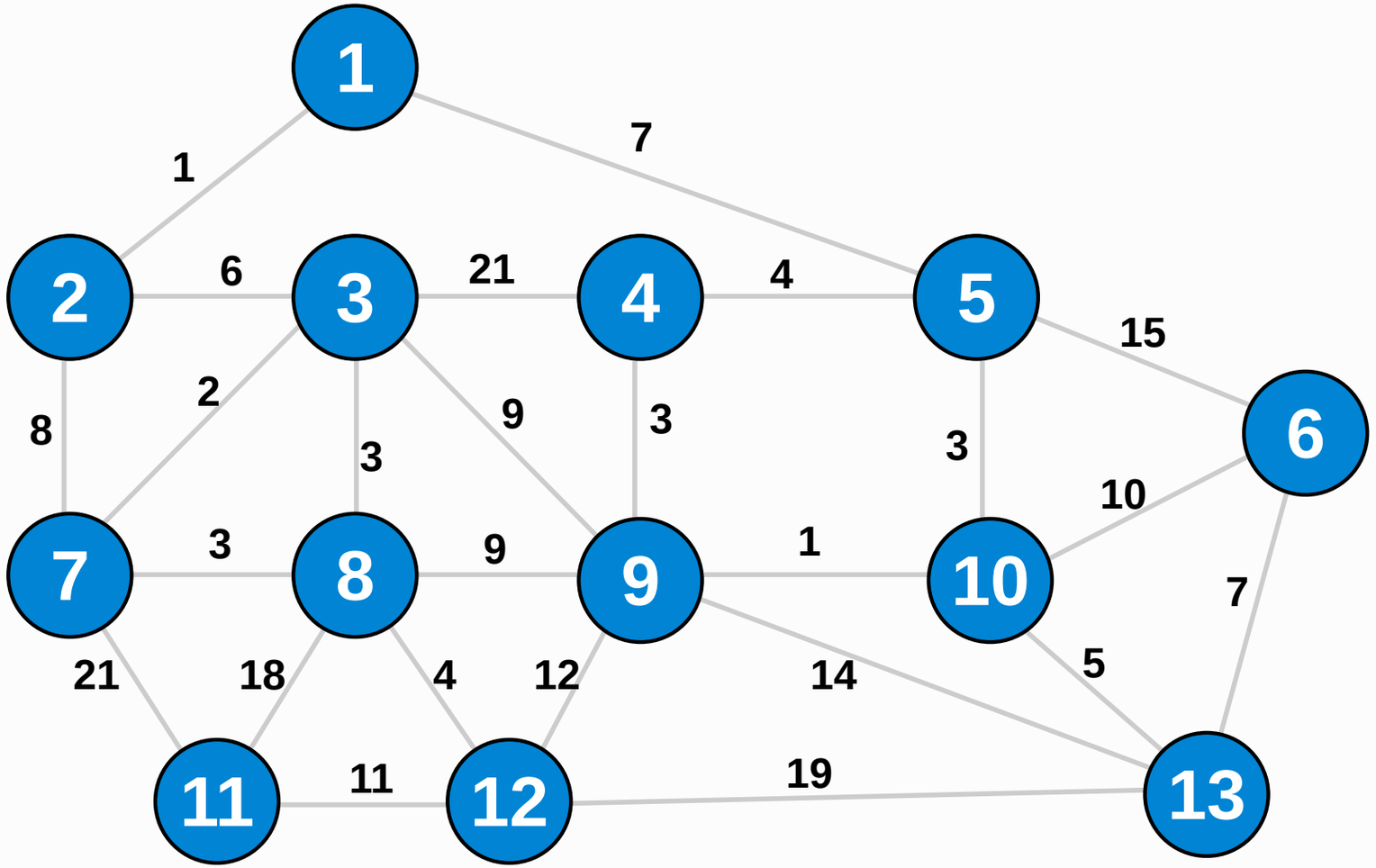
KRUSKAL

ALGORITMO DE KRUSKAL

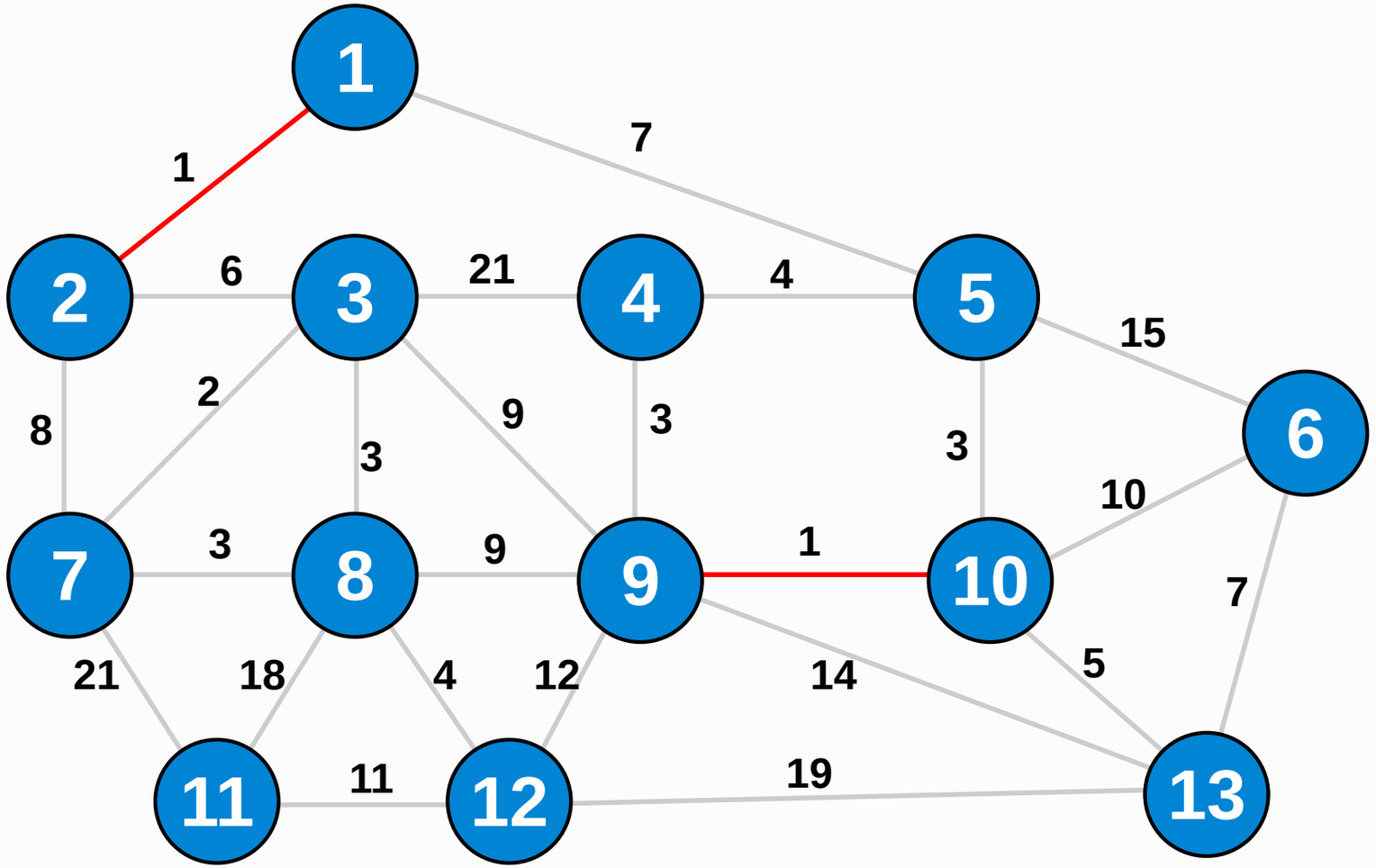


CREO UN ARBOL SEPARADO PARA CADA VERTICE.
VOY TOMANDO CADA ARISTA DE FORMA ASCENDENTE Y ME QUEDO CON LAS QUE UNEN 2 ARBOLES.

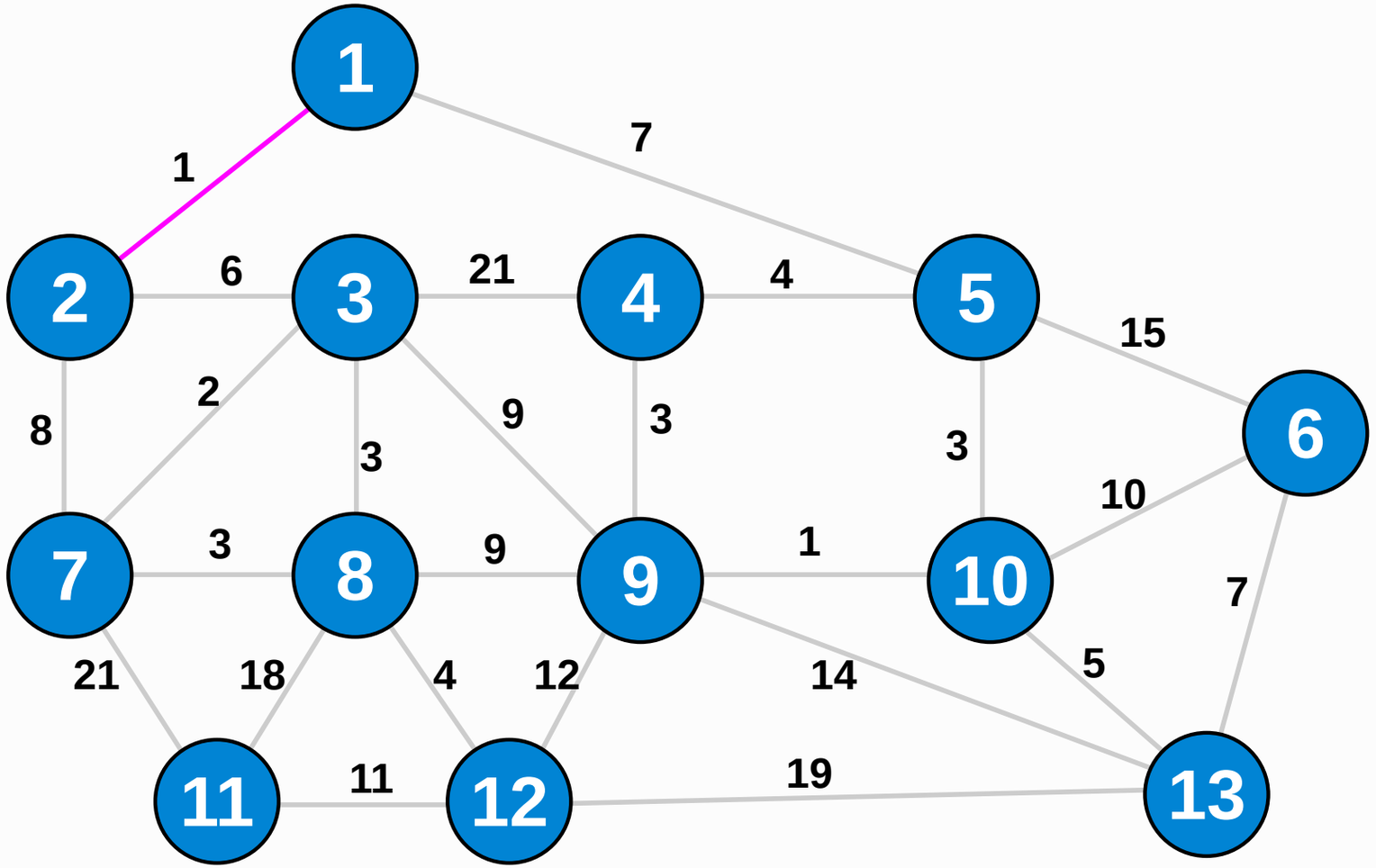
ALGORITMO DE KRUSKAL



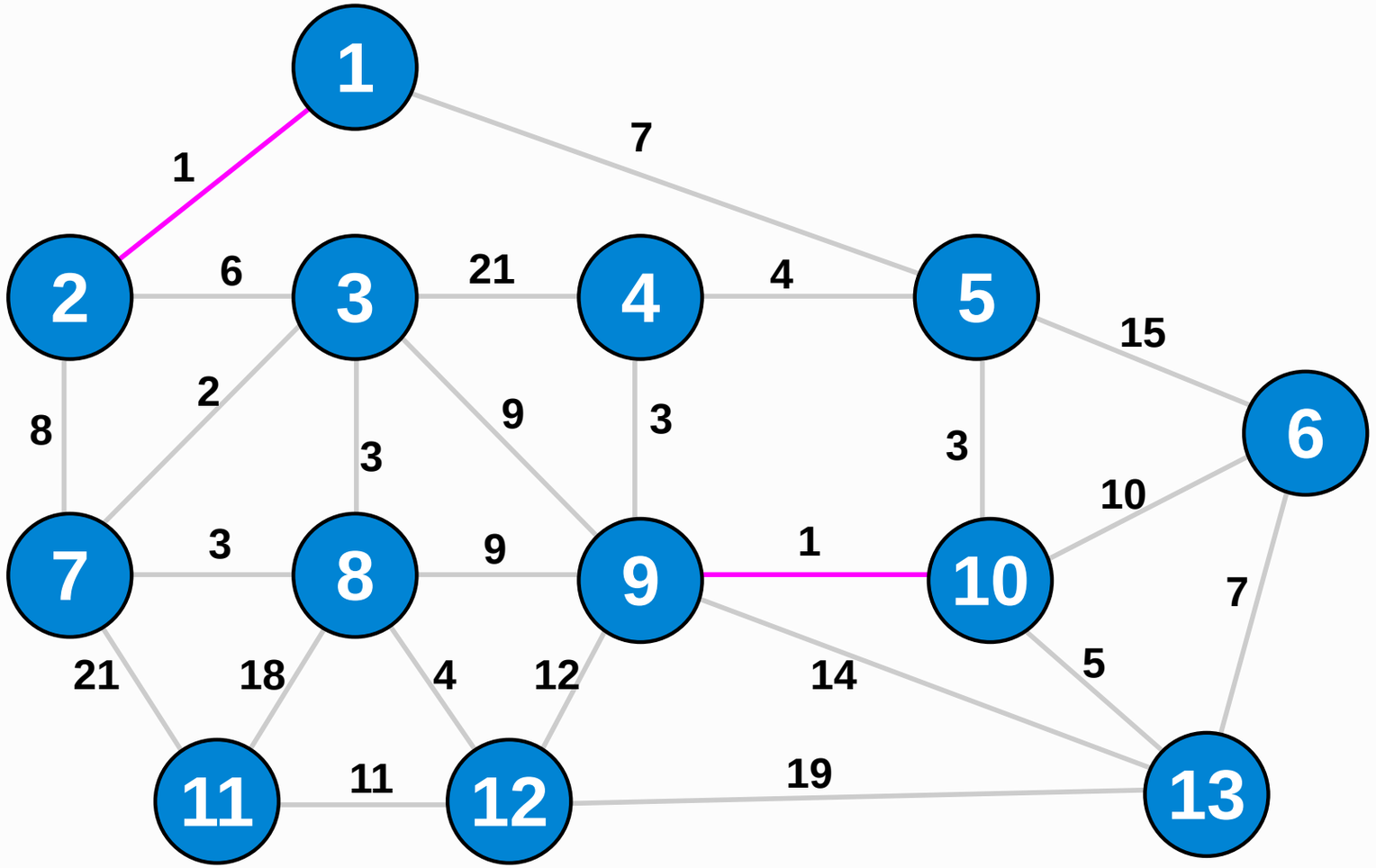
ALGORITMO DE KRUSKAL



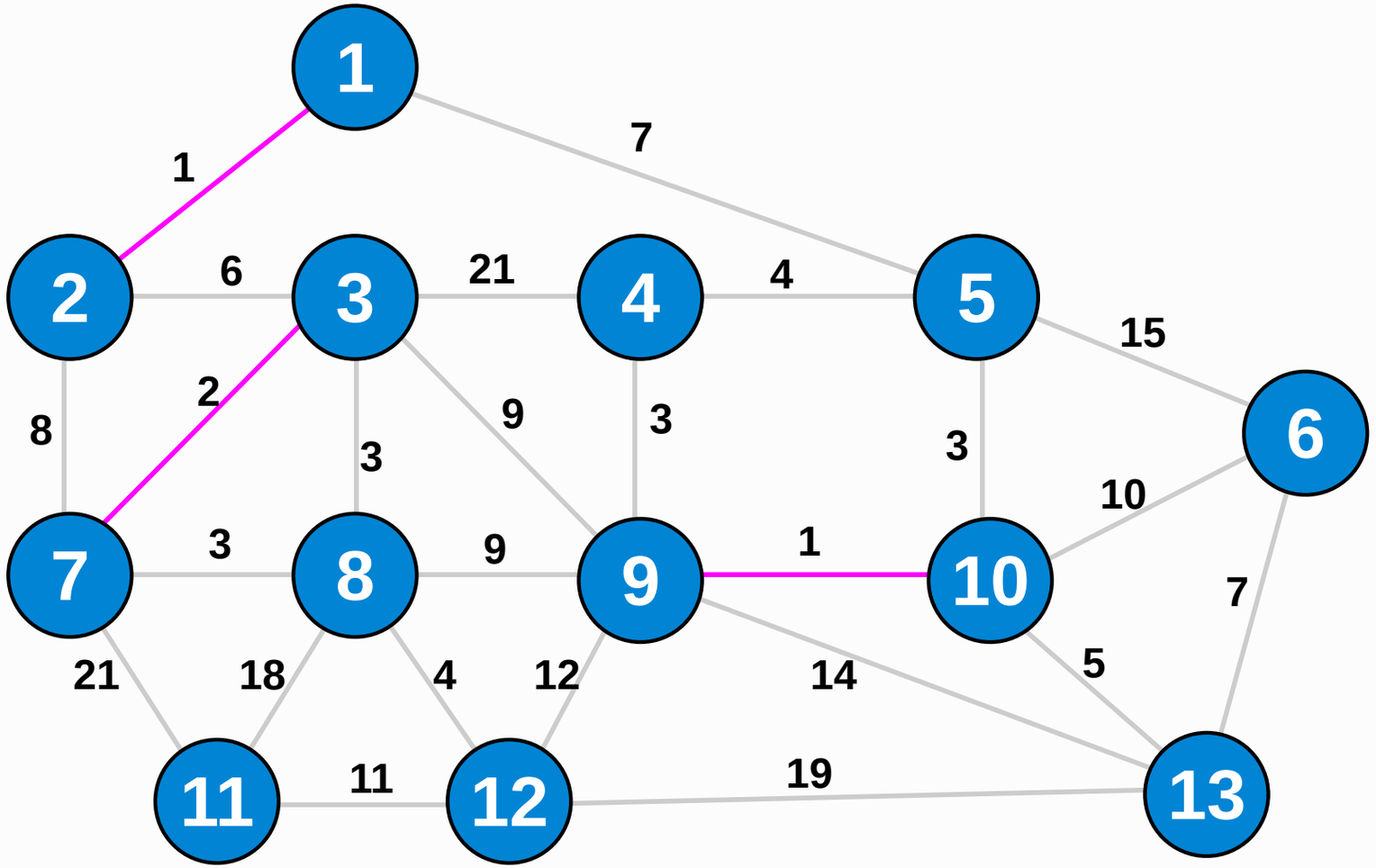
ALGORITMO DE KRUSKAL



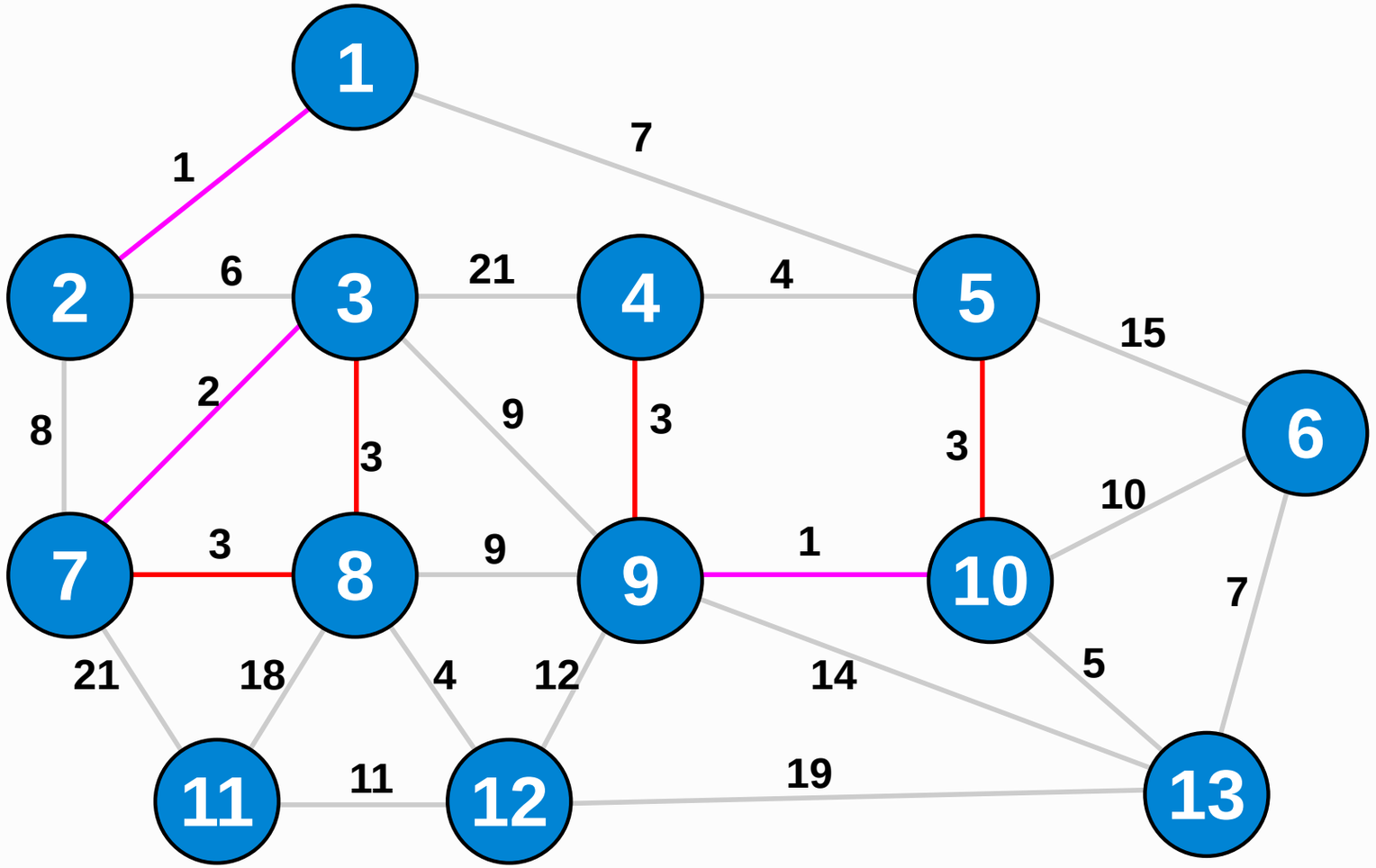
ALGORITMO DE KRUSKAL



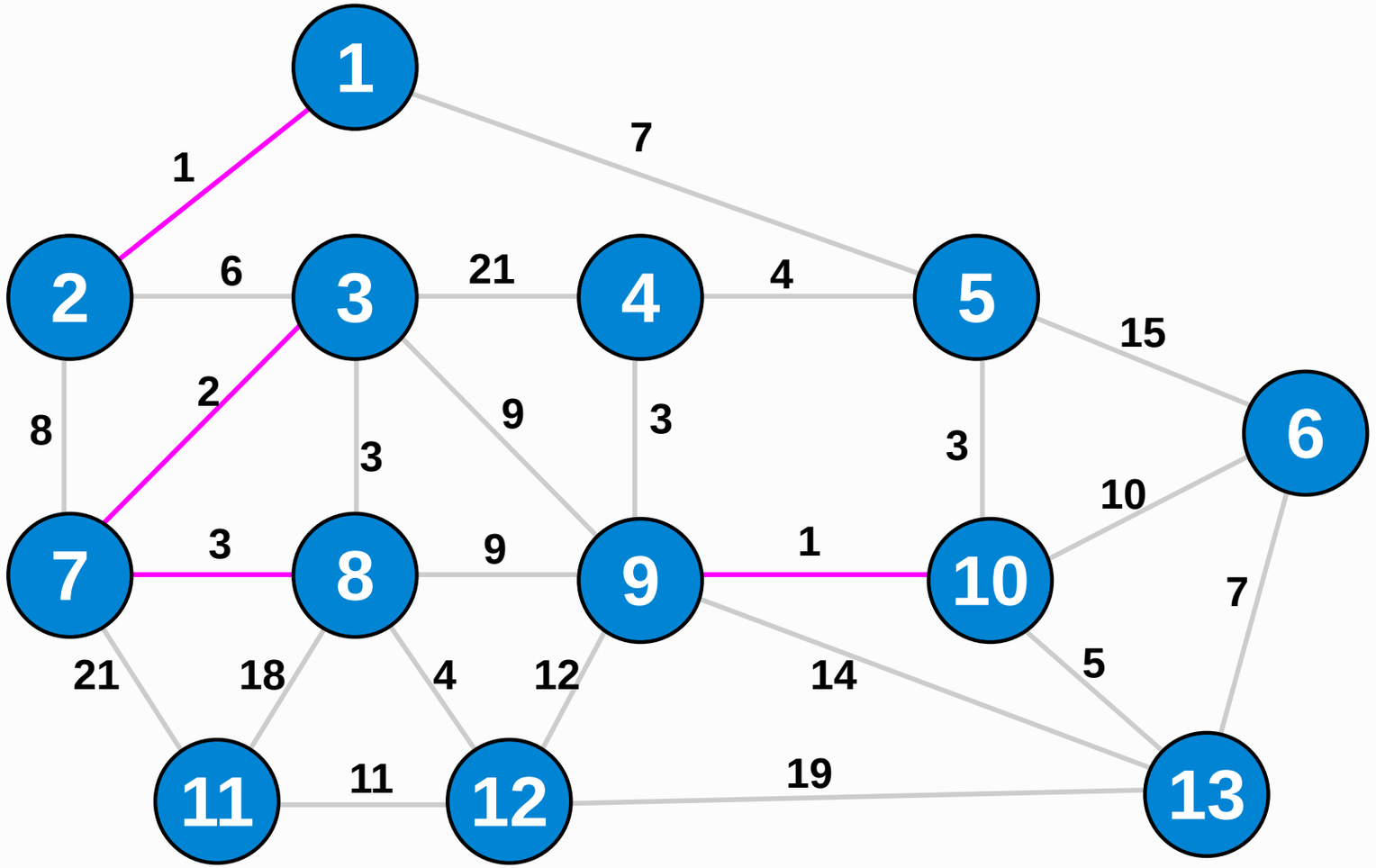
ALGORITMO DE KRUSKAL



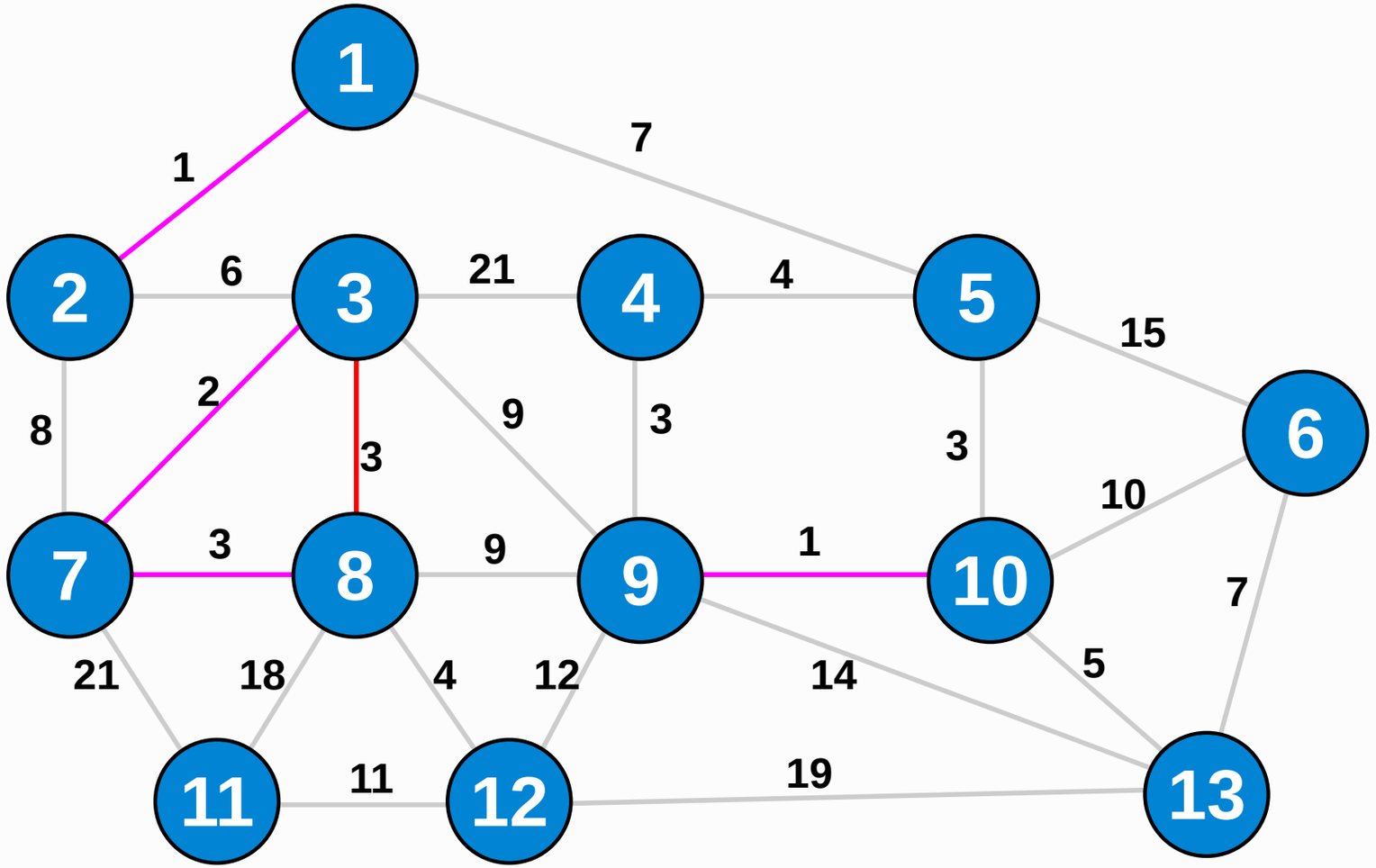
ALGORITMO DE KRUSKAL



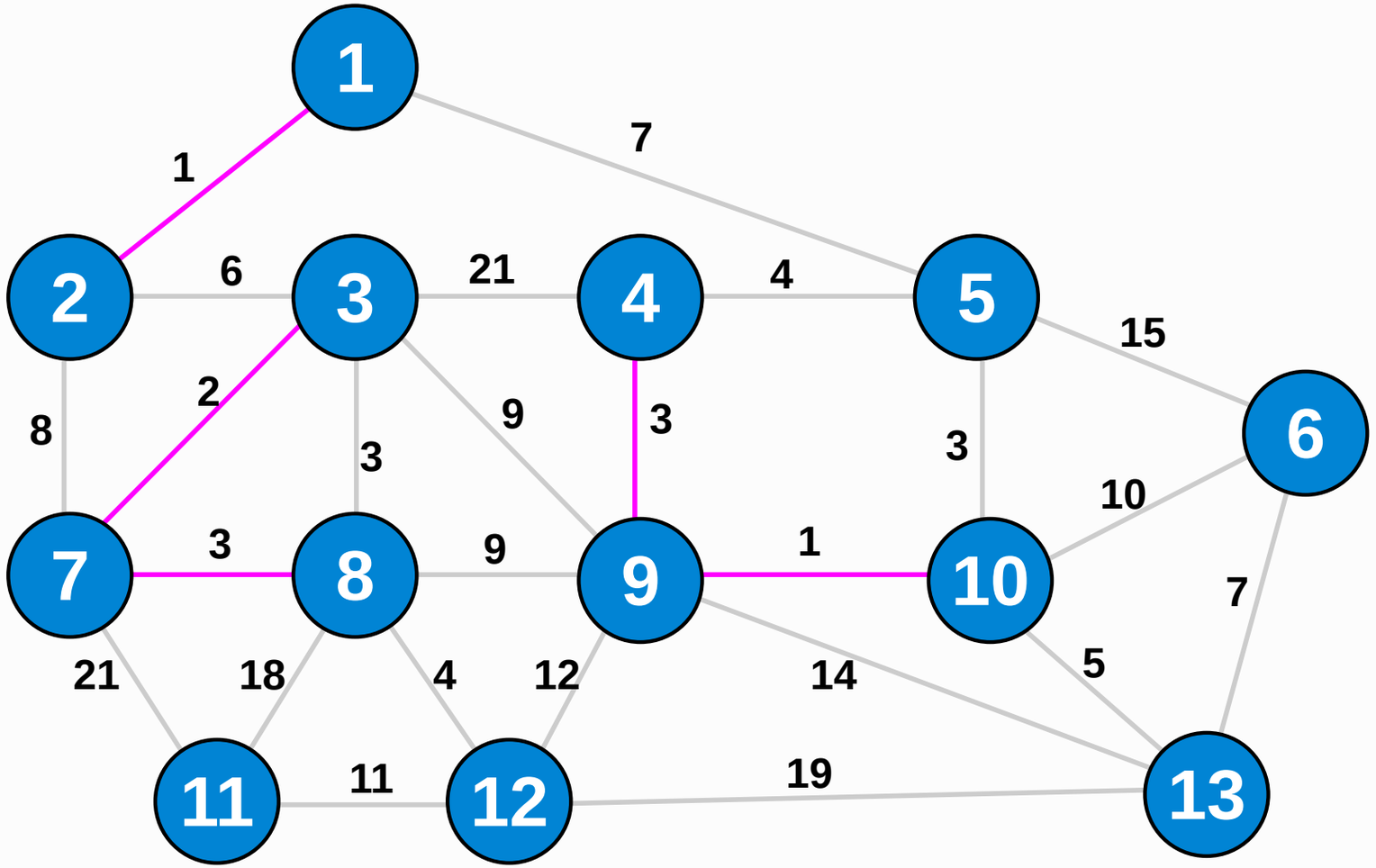
ALGORITMO DE KRUSKAL



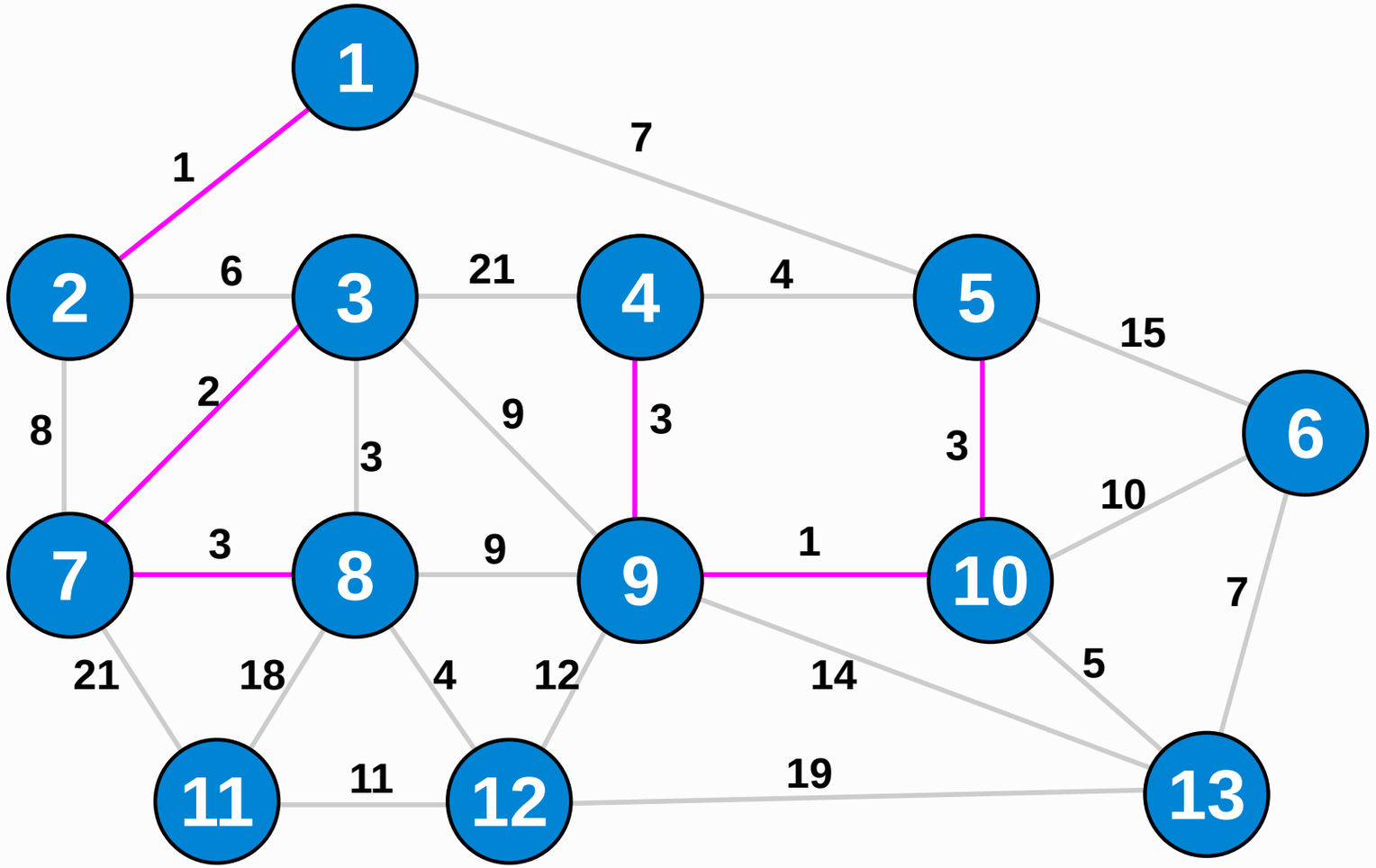
ALGORITMO DE KRUSKAL



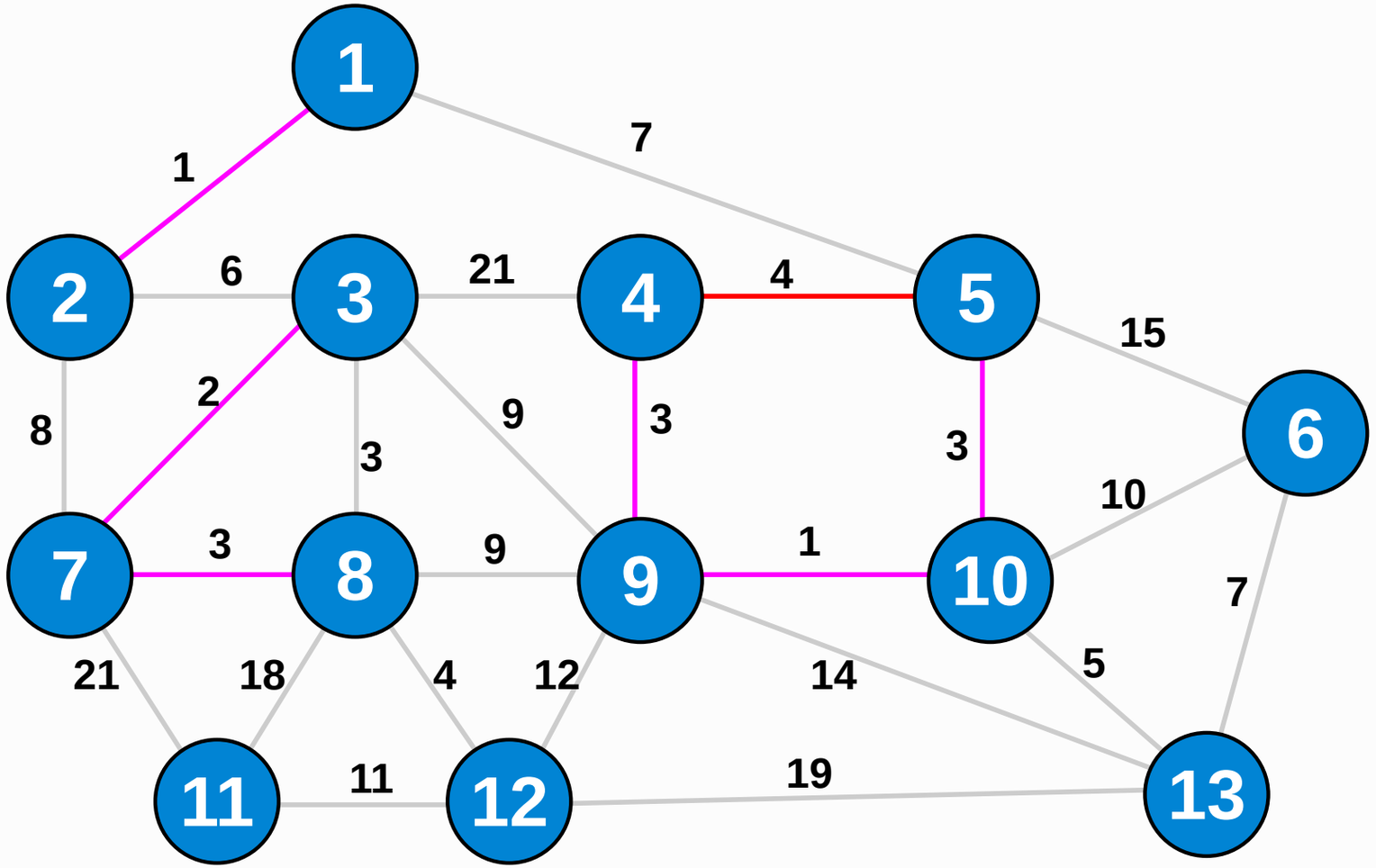
ALGORITMO DE KRUSKAL



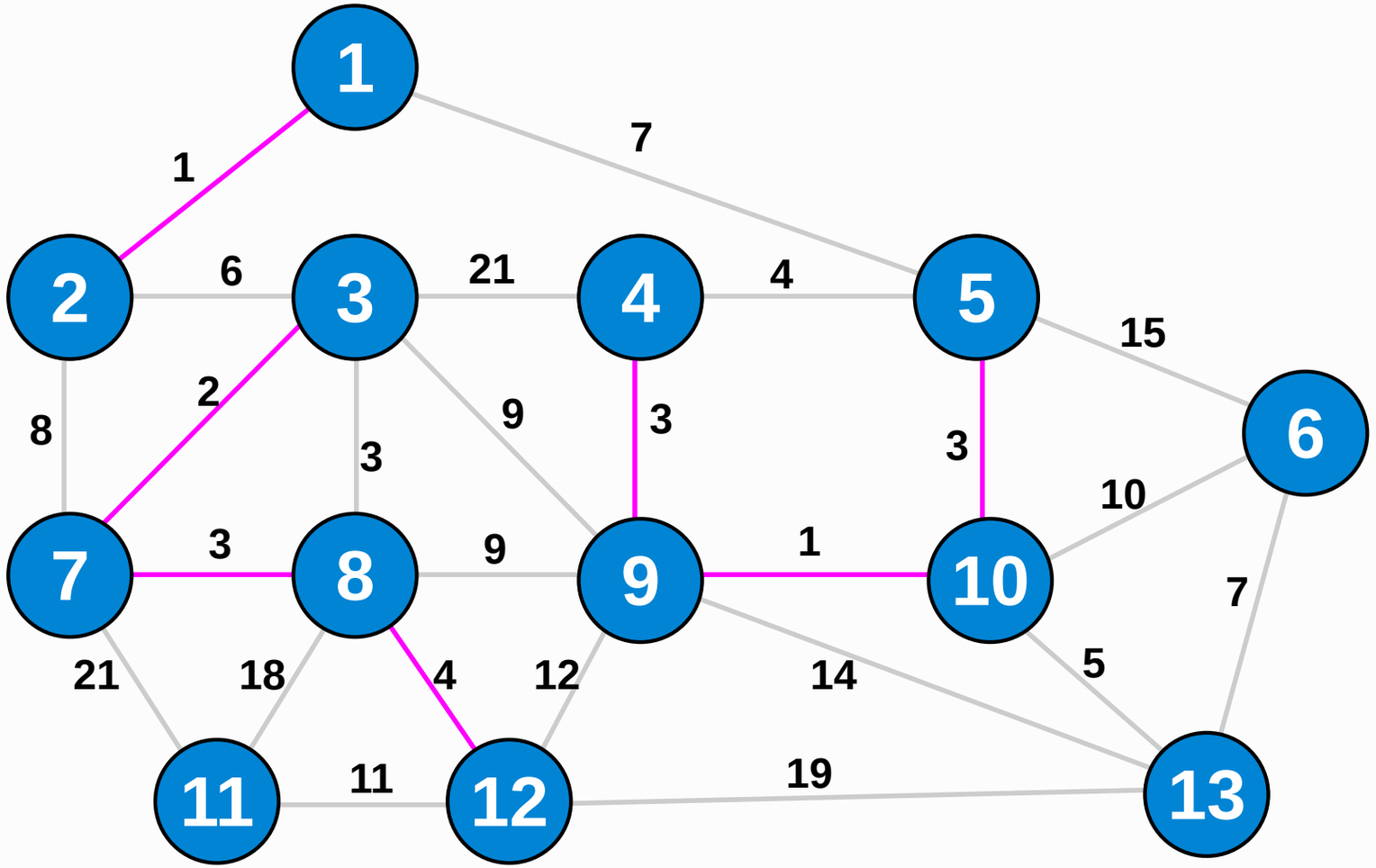
ALGORITMO DE KRUSKAL



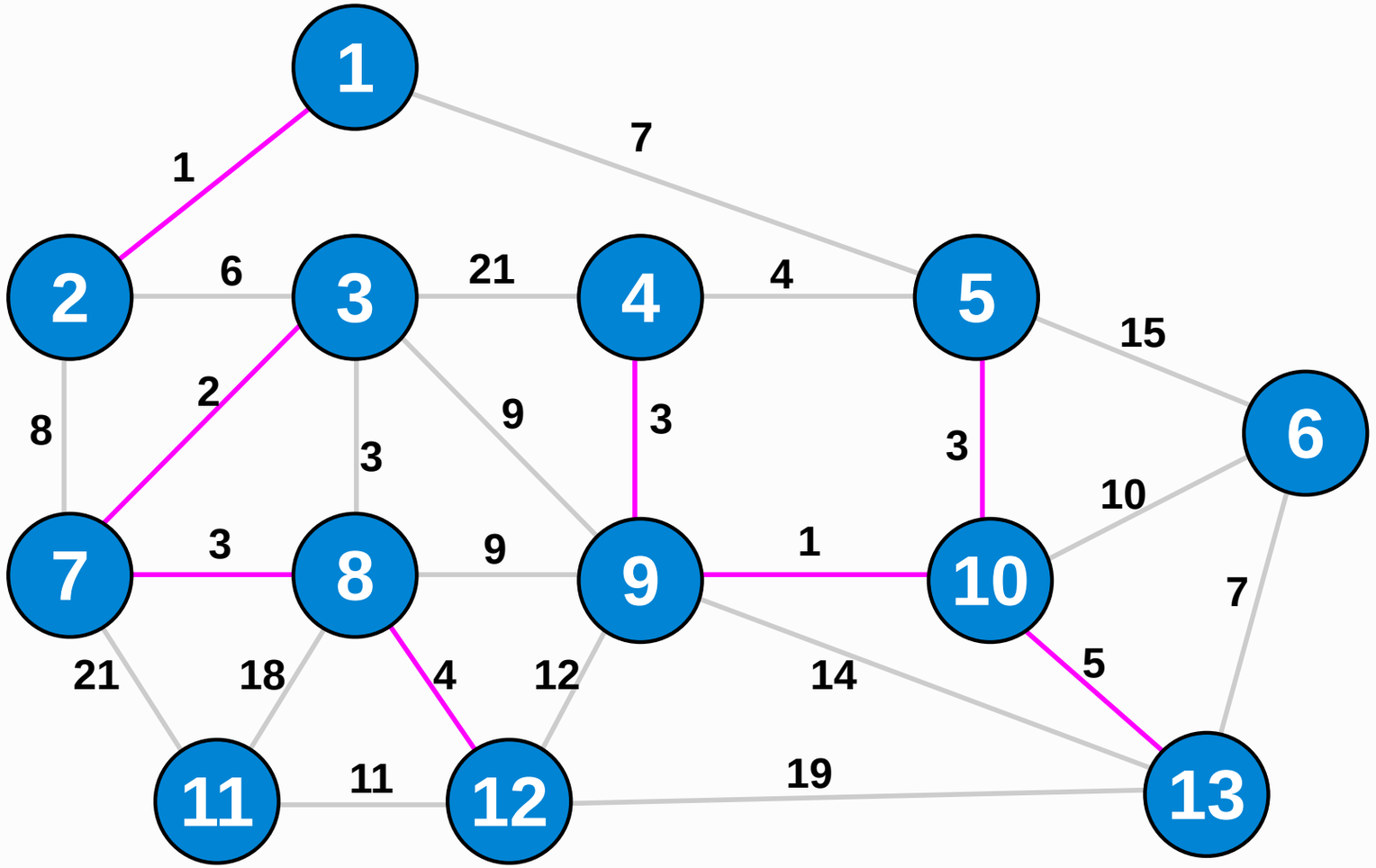
ALGORITMO DE KRUSKAL



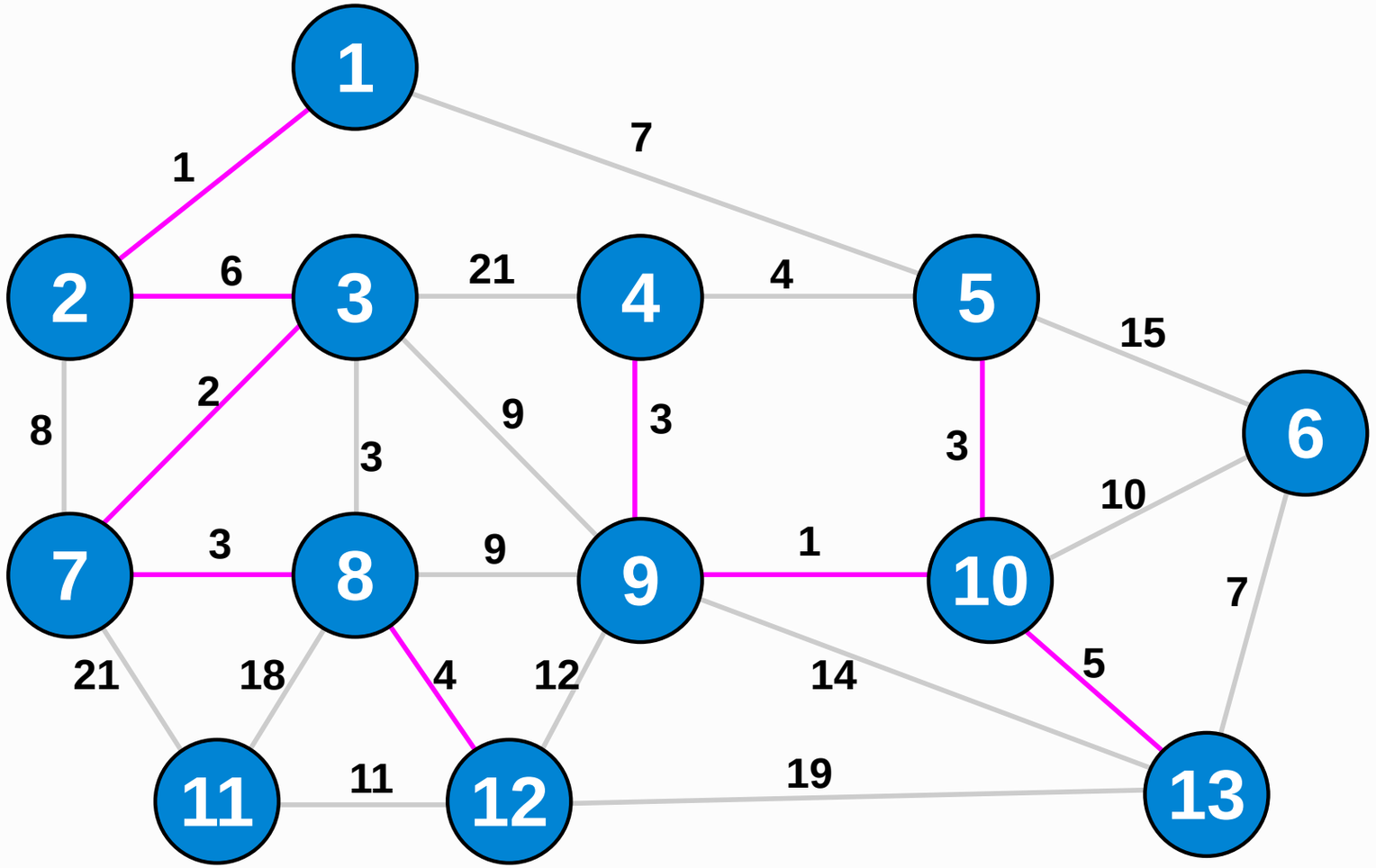
ALGORITMO DE KRUSKAL



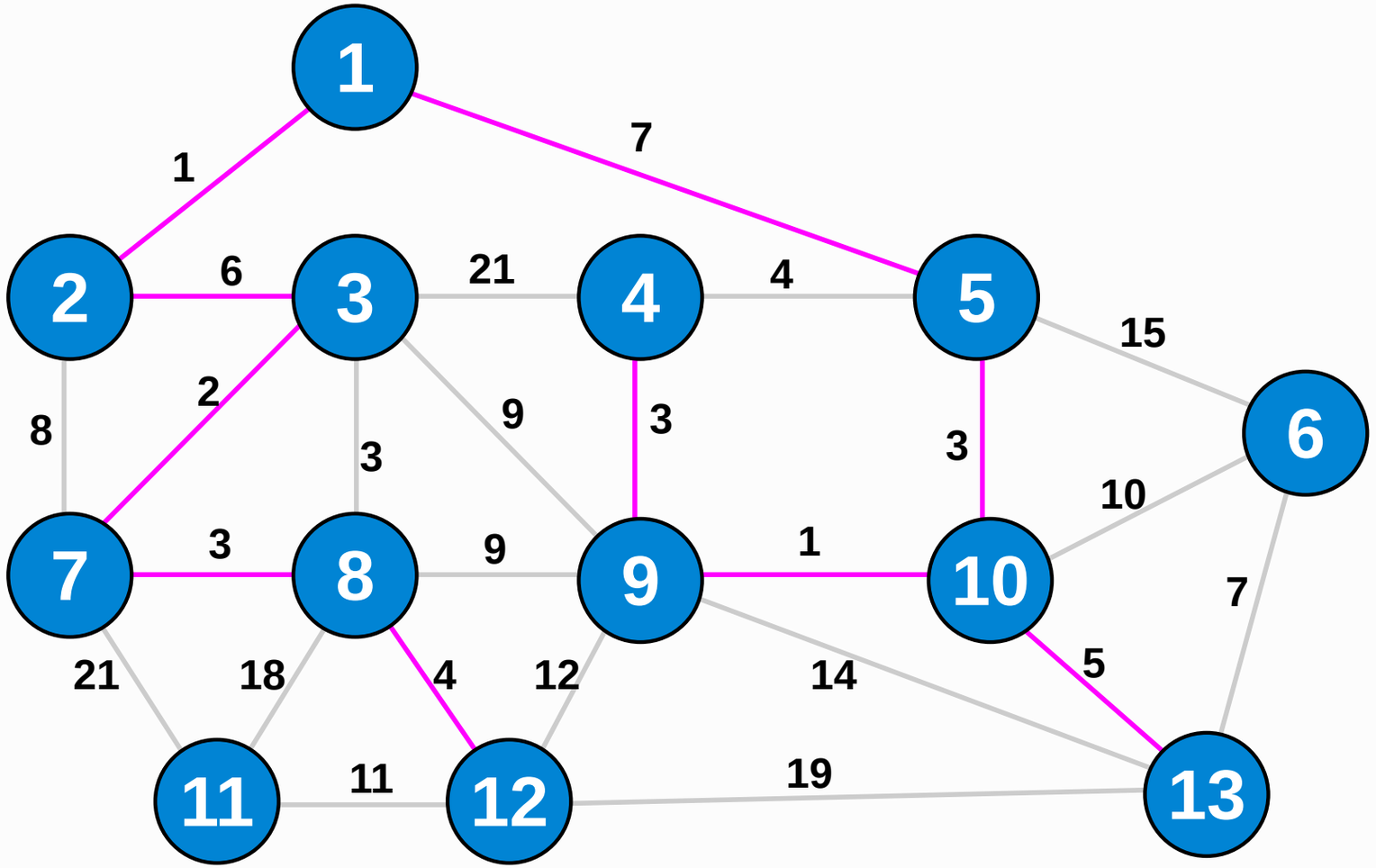
ALGORITMO DE KRUSKAL



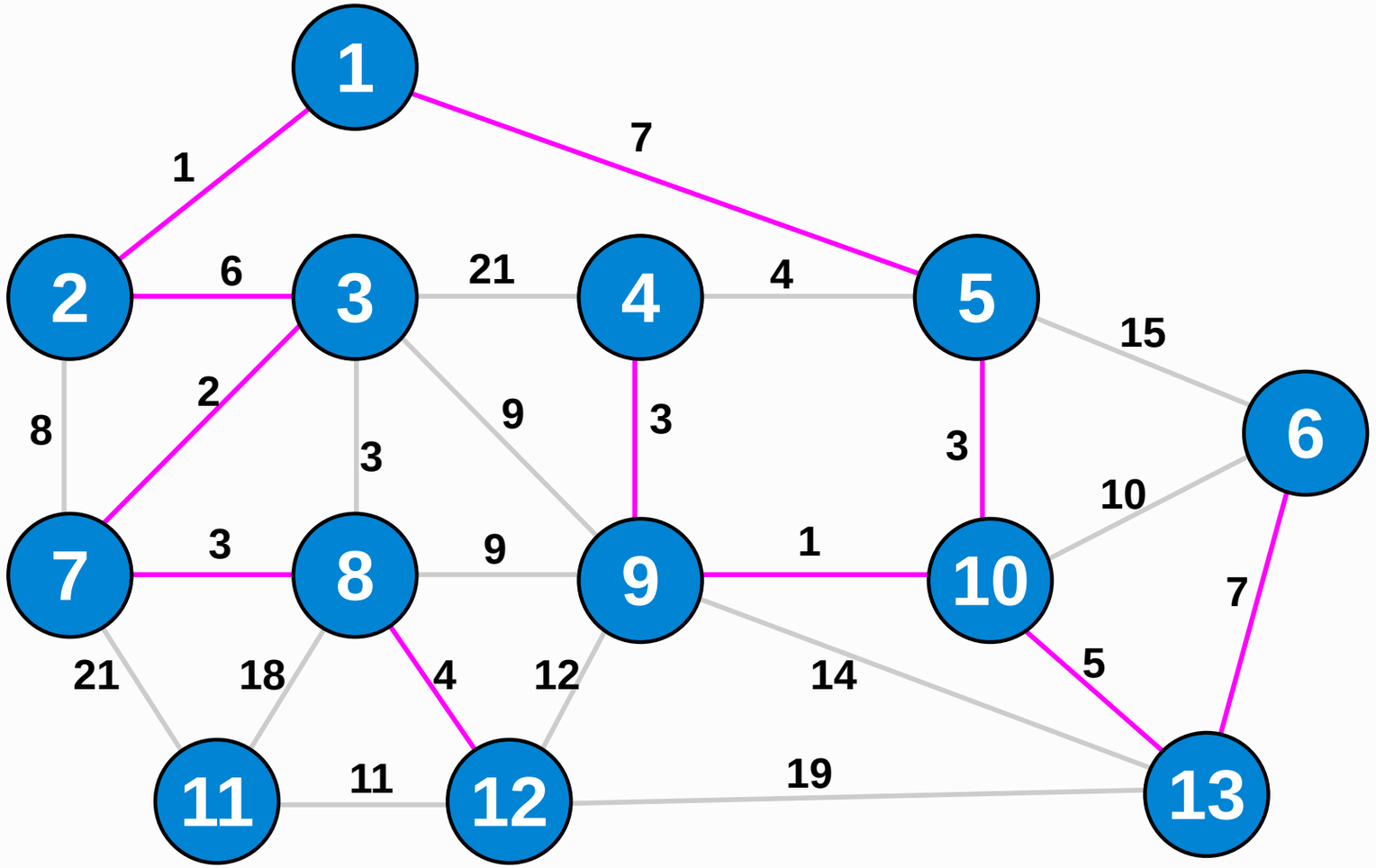
ALGORITMO DE KRUSKAL



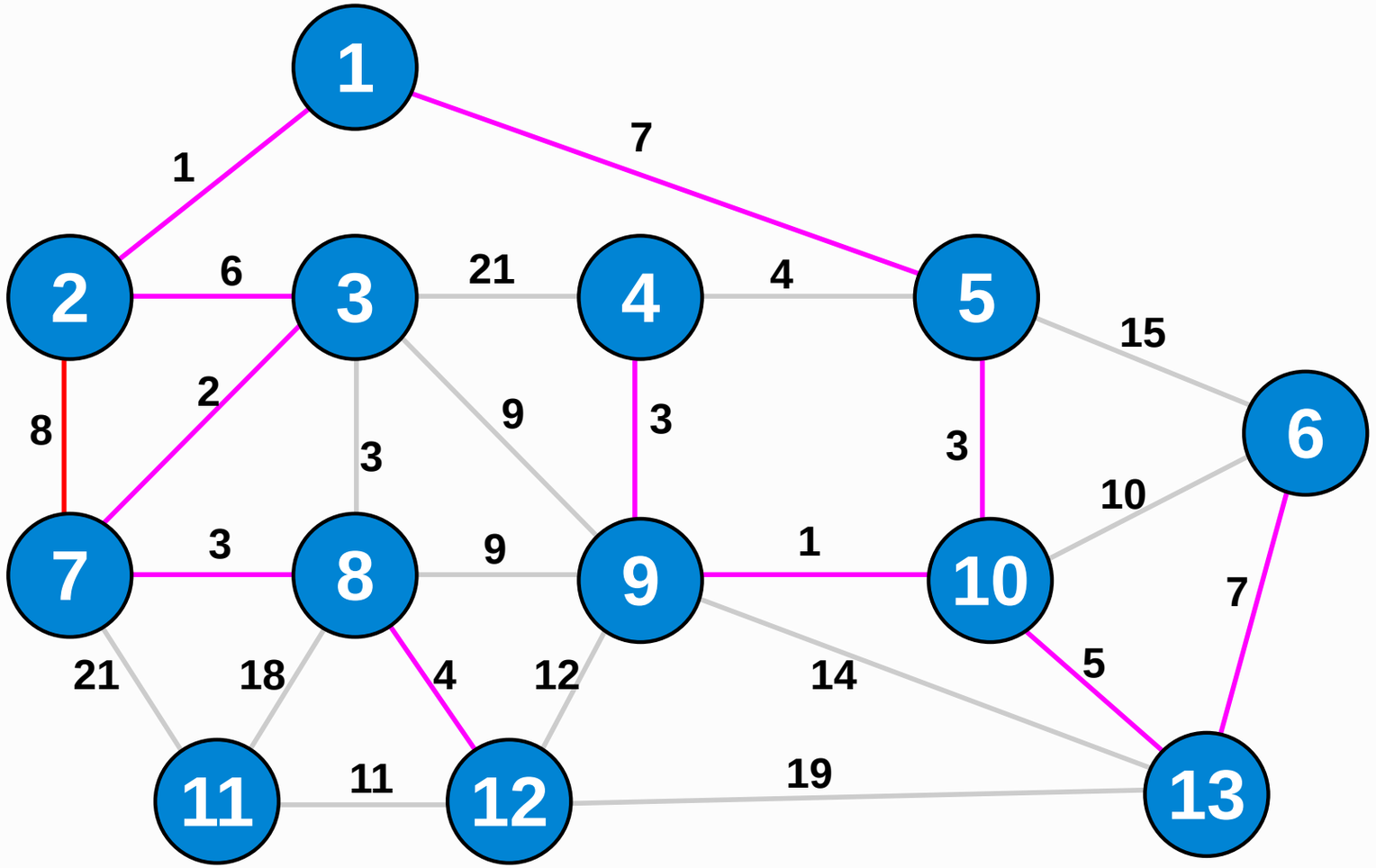
ALGORITMO DE KRUSKAL



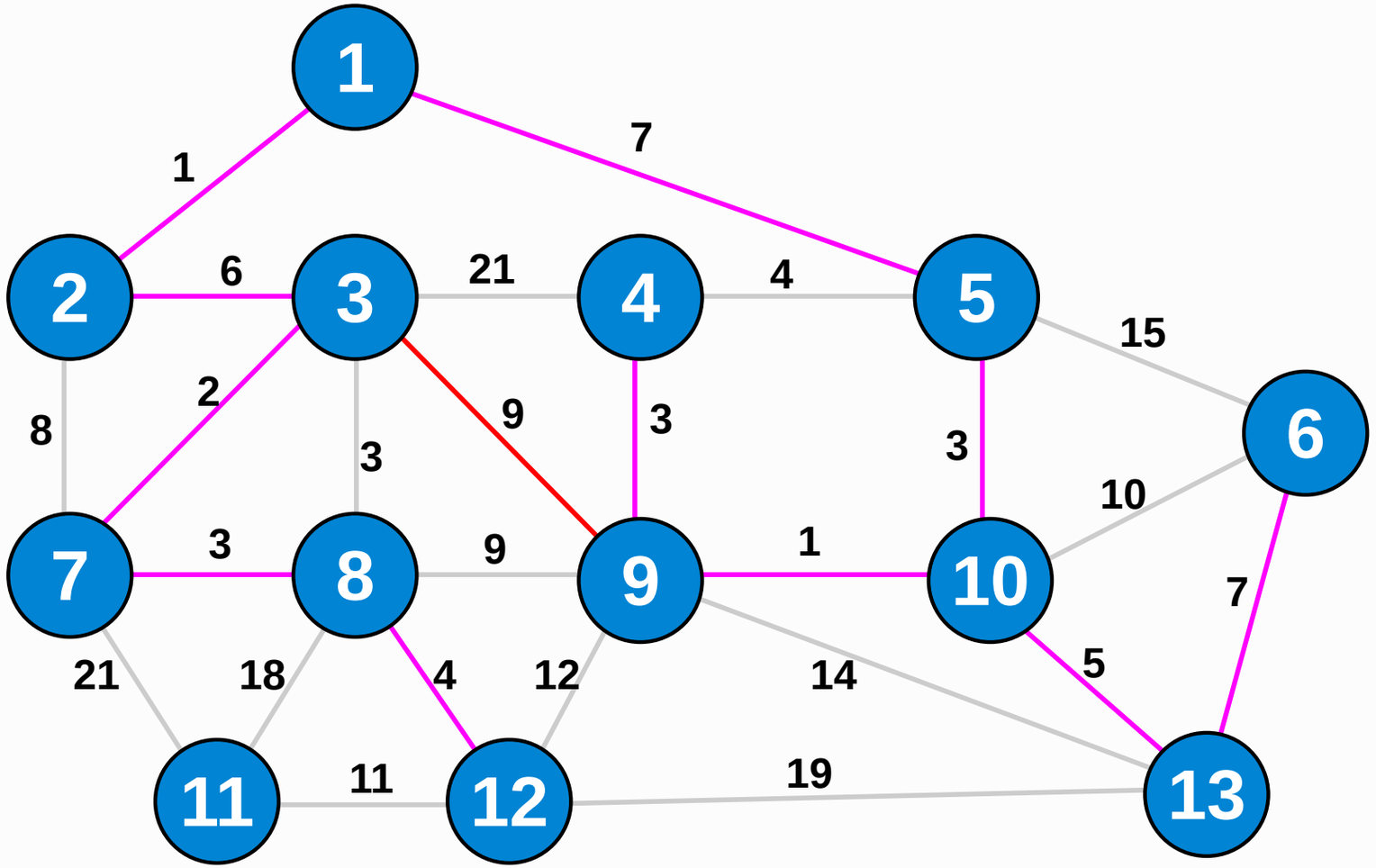
ALGORITMO DE KRUSKAL



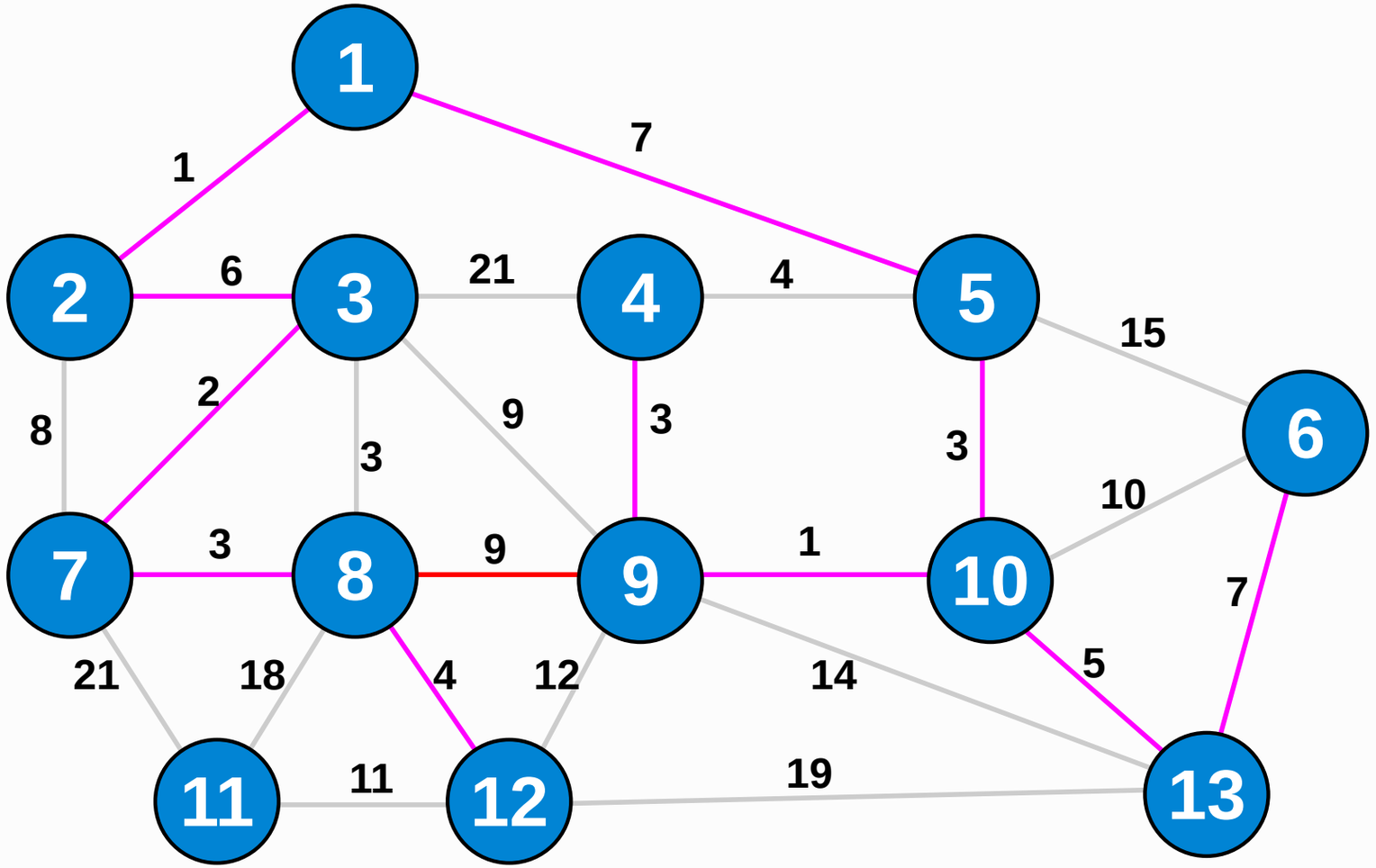
ALGORITMO DE KRUSKAL



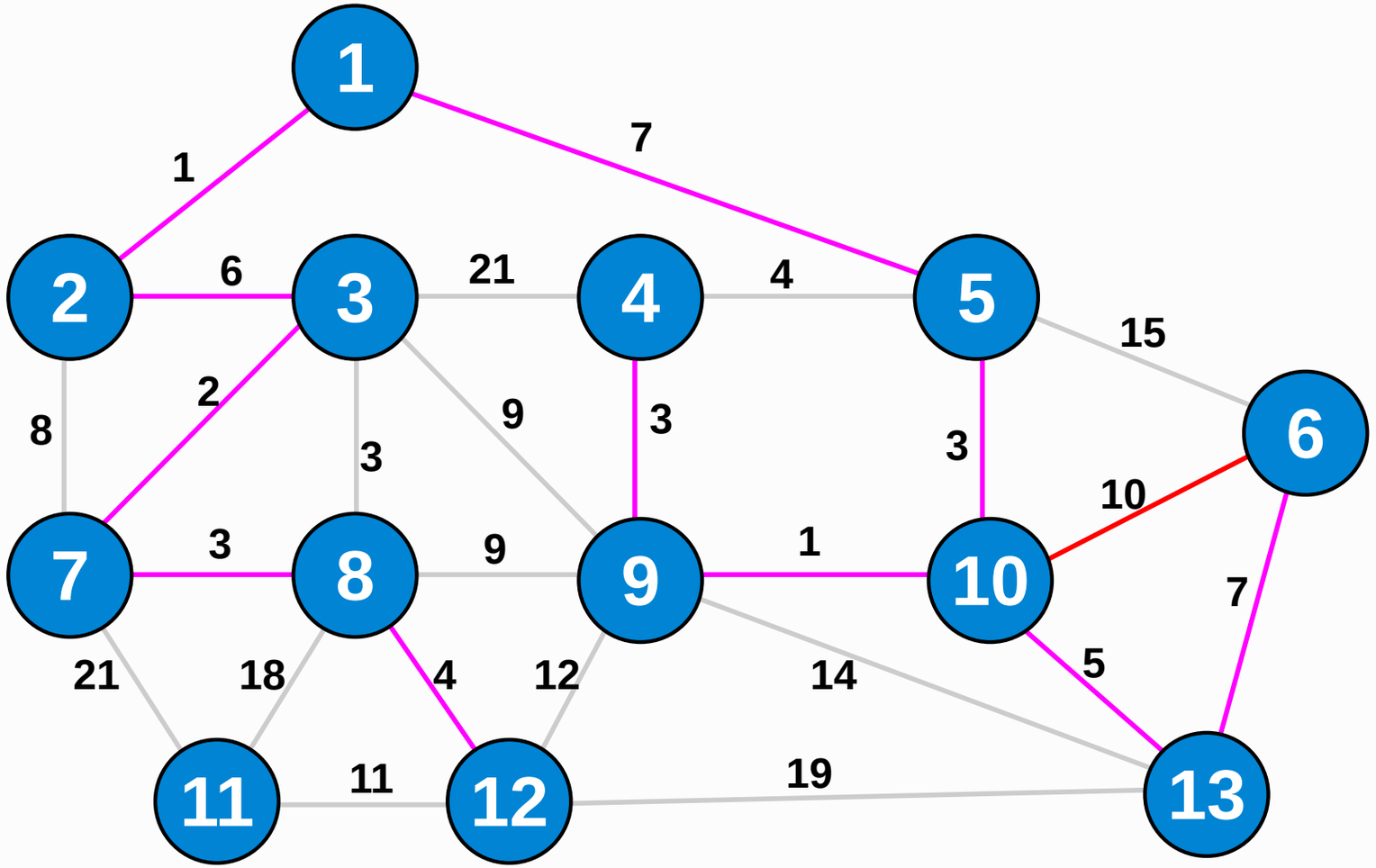
ALGORITMO DE KRUSKAL



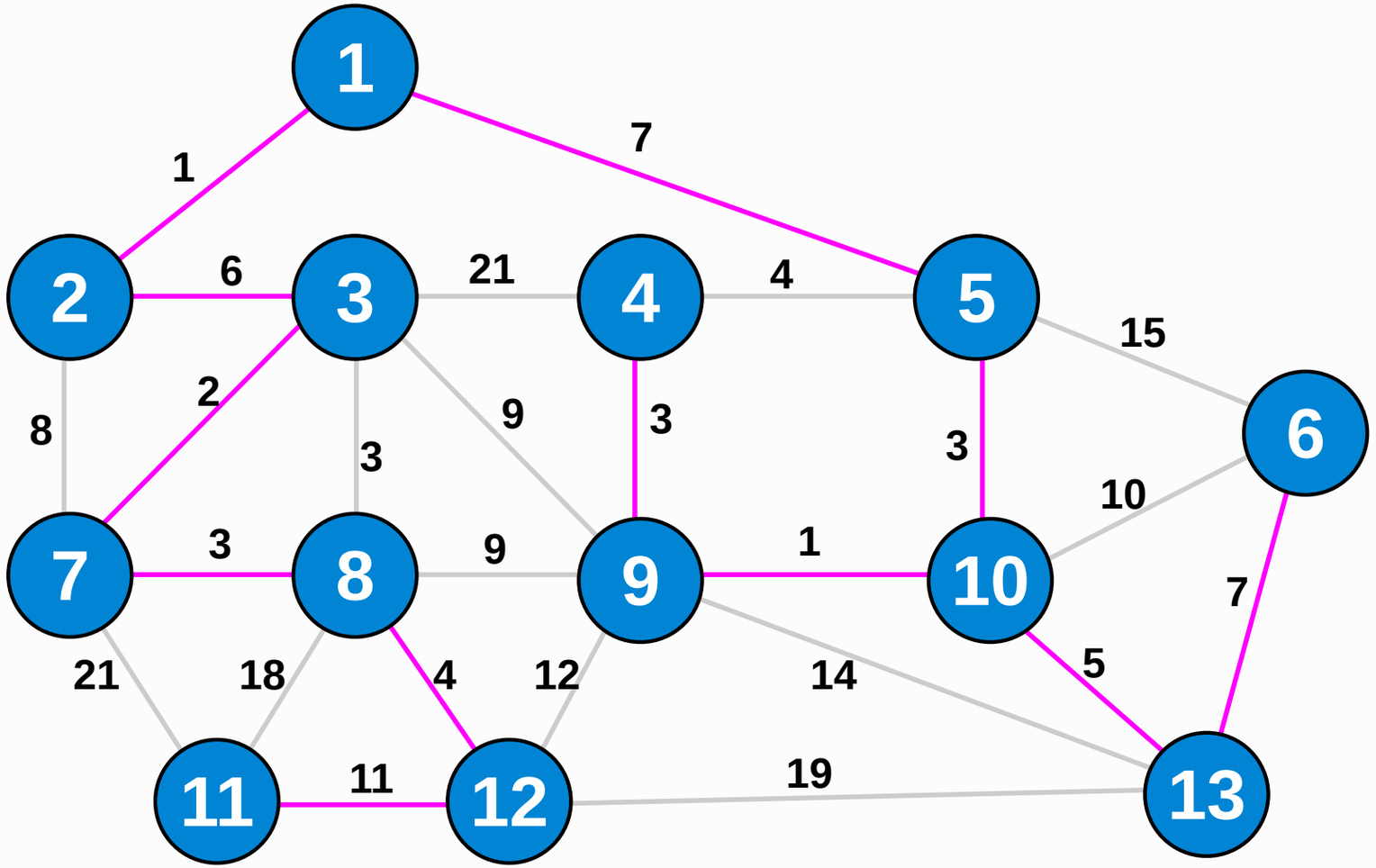
ALGORITMO DE KRUSKAL



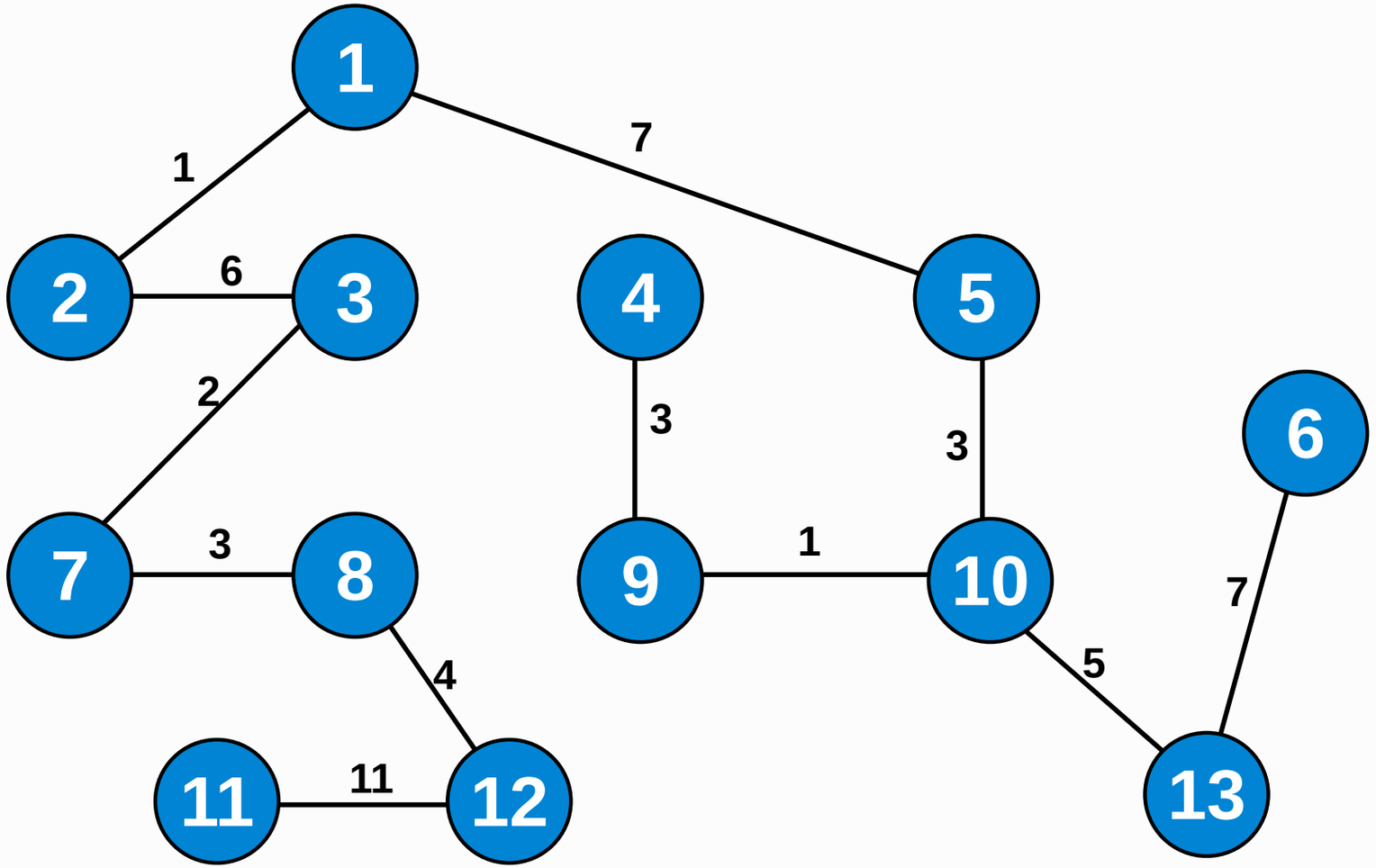
ALGORITMO DE KRUSKAL



ALGORITMO DE KRUSKAL



ALGORITMO DE KRUSKAL



FACULTAD
DE INGENIERIA
Universidad de Buenos Aires

¿PREGUNTAS?

FIN

FACULTAD
DE INGENIERIA
Universidad de Buenos Aires