

Benes Network of dimension two  $B(2)$

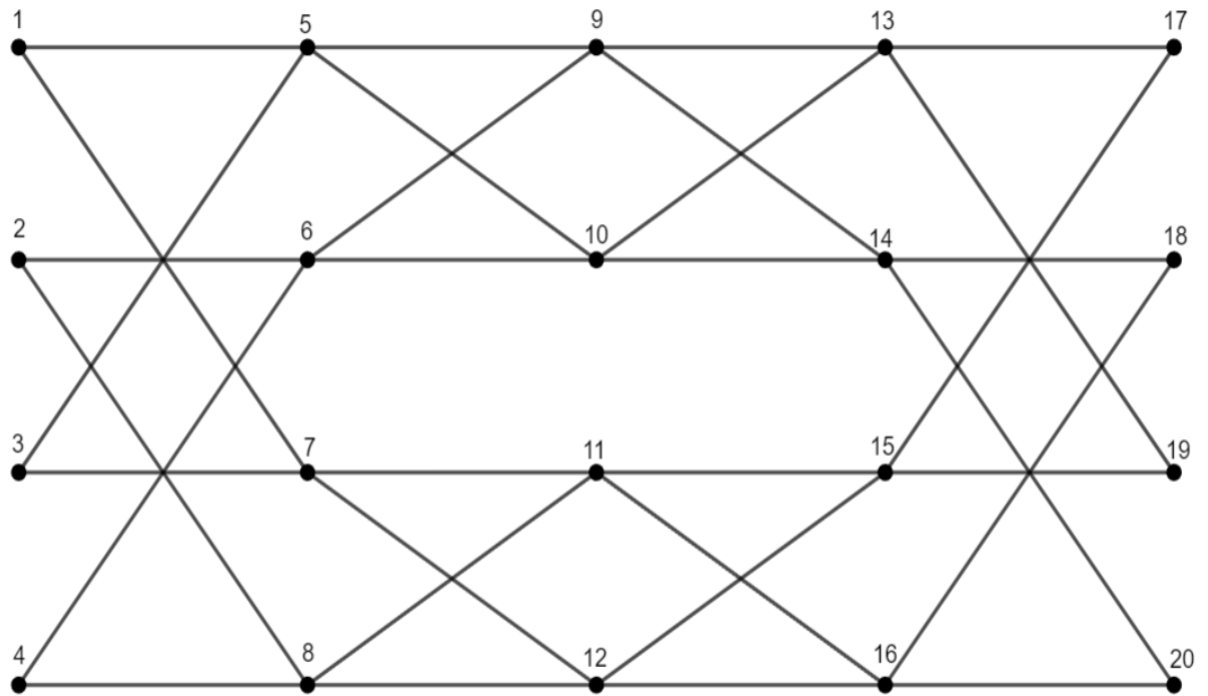


Fig.1 Normal representation of Benes  $B(2)$

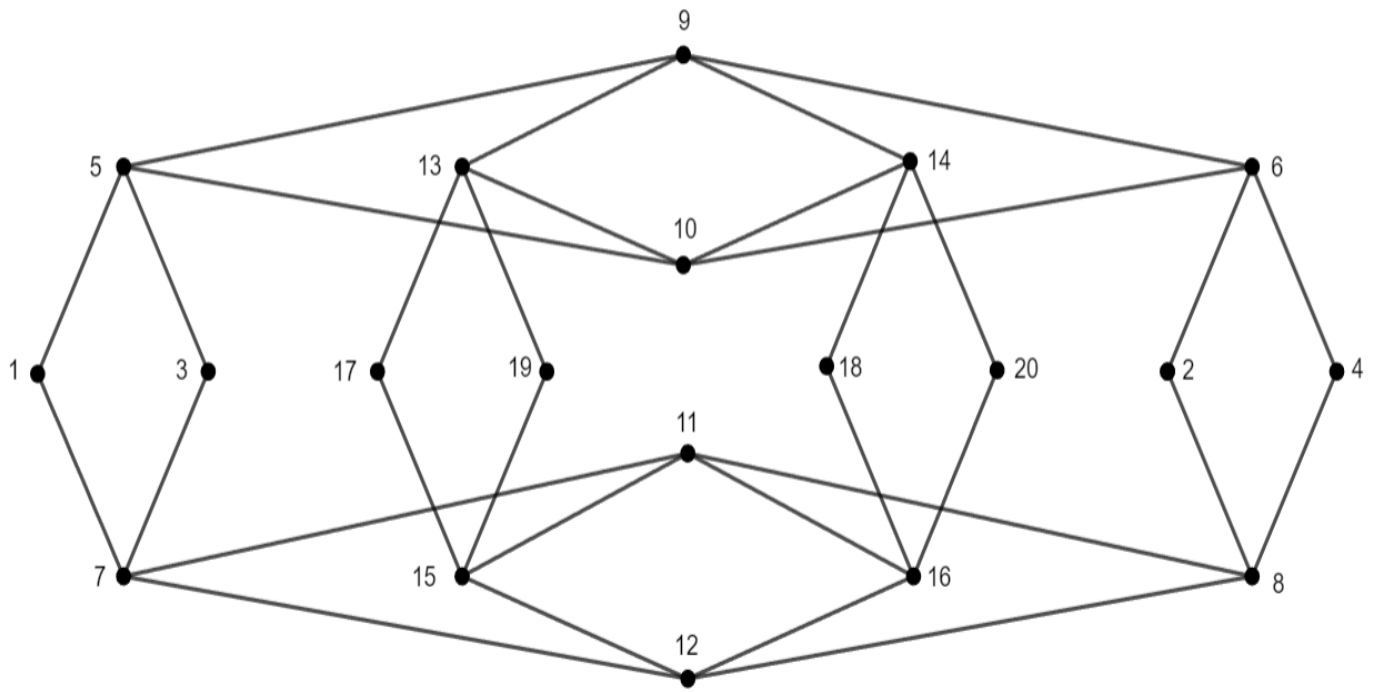


Fig.2 Diamond representation of Benes  $B(2)$

Extracted Metric Bases using BIGS algorithm

1. {1, 2, 9, 11, 17, 18}
2. {1, 2, 9, 11, 17, 20}
3. {1, 2, 9, 11, 18, 19}
4. {1, 2, 9, 11, 19, 20}
5. {1, 2, 9, 12, 17, 18}
6. {1, 2, 9, 12, 17, 20}
7. {1, 2, 9, 12, 18, 19}
8. {1, 2, 9, 12, 19, 20}
9. {1, 2, 10, 11, 17, 18}
10. {1, 2, 10, 11, 17, 20}
11. {1, 2, 10, 11, 18, 19}
12. {1, 2, 10, 11, 19, 20}
13. {1, 2, 10, 12, 17, 18}
14. {1, 2, 10, 12, 17, 20}
15. {1, 2, 10, 12, 18, 19}
16. {1, 2, 10, 12, 19, 20}
17. {1, 4, 9, 11, 17, 18}
18. {1, 4, 9, 11, 17, 20}
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28. {1, 4, 10, 11, 19, 20}
29. {1, 4, 10, 12, 17, 18}
30. {1, 4, 10, 12, 17, 20}
31. {1, 4, 10, 12, 18, 19}
32. {1, 4, 10, 12, 19, 20}
33. {2, 3, 9, 11, 17, 18}
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62. {3, 4, 10, 12, 17, 20}
63. {3, 4, 10, 12, 18, 19}
64. {3, 4, 10, 12, 19, 20}