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Input( 3 Vertices)

2  
0 1  
1 0  
2

Expected: exact max clique: 2

Actual: exact max clique: 2

Runtime

--- 1.1659607887268066 seconds —

---

Input(5 Vertices):

4  
0 1 2 3  
1 0 2 3  
2 0 1 3  
3 0 1 2  
4

Expected: exact max clique: 3

Actual: exact max clique: 3

Runtime: --- 1.3982501029968262 seconds —

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Input(7 Vertices)

6  
0 2  
1 2 3 4 5 6 1  
2 1 3 4 5 6  
3 1 2 4 5 6  
4 1 2 3 5 6  
5 1 2 3 4 6  
6 1 2 3 4 5

exact max clique 6

--- 1.250974178314209 seconds —

---

9  
0 2 8 1  
1 6 1 2  
2 1 2  
3  
4 5 6 7 8  
5 4 6 7 8  
6 4 5 7 8  
7 4 5 6 8  
8 4 5 6 7

exact max clique 5  
--- 1.4033799171447754 seconds —

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11  
0 1 4 5 6 8 10 1 8 4 8  
1 0 4 5 6 8 10 6 3 10  
2 7 3  
3 4  
4 0 1 5 6 8 10 8  
5 0 1 4 6 8 10  
6 0 1 4 5 8 10  
7  
8 0 1 4 5 6 10  
9  
10 0 1 4 5 6 8

exact max clique 7  
--- 1.3321149349212646 seconds —

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0 1 2 3 4 5 6 7 8 9 11 12 3  
1 0 2 3 4 5 6 7 8 9 11 12  
2 0 1 3 4 5 6 7 8 9 11 12  
3 0 1 2 4 5 6 7 8 9 11 12  
4 0 1 2 3 5 6 7 8 9 11 12  
5 0 1 2 3 4 6 7 8 9 11 12  
6 0 1 2 3 4 5 7 8 9 11 12  
7 0 1 2 3 4 5 6 8 9 11 12  
8 0 1 2 3 4 5 6 7 9 11 12  
9 0 1 2 3 4 5 6 7 8 11 12  
10  
11 0 1 2 3 4 5 6 7 8 9 12  
12 0 1 2 3 4 5 6 7 8 9 11

exact max clique 12

--- 0.9154069423675537 seconds ---

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15  
0 1 3 4 5 6 7 9 11 12 14 5 8 10  
1 0 3 4 5 6 7 9 11 12 14 4 8 7  
2 8 7 13  
3 0 1 4 5 6 7 9 11 12 14 11 3 14  
4 0 1 3 5 6 7 9 11 12 14 0 1  
5 0 1 3 4 6 7 9 11 12 14 2  
6 0 1 3 4 5 7 9 11 12 14  
7 0 1 3 4 5 6 9 11 12 14  
8  
9 0 1 3 4 5 6 7 11 12 14  
10  
11 0 1 3 4 5 6 7 9 12 14  
12 0 1 3 4 5 6 7 9 11 14  
13  
14 0 1 3 4 5 6 7 9 11 12

exact max clique 11

--- 1.2357778549194336 seconds ---

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17  
0 2 4 5 7 8 9 10 11 13 16 3 11 14 5 8 5  
1 13 11 6 5 2 9  
2 0 4 5 7 8 9 10 11 13 16 2 16 2 2 11 10  
3 3 3 9 4 1 6  
4 0 2 5 7 8 9 10 11 13 16 3 16 11 5 15 9  
5 0 2 4 7 8 9 10 11 13 16 5 5 0 7  
6 0 0 4  
7 0 2 4 5 8 9 10 11 13 16 5 12 13  
8 0 2 4 5 7 9 10 11 13 16 11 0  
9 0 2 4 5 7 8 10 11 13 16  
10 0 2 4 5 7 8 9 11 13 16  
11 0 2 4 5 7 8 9 10 13 16  
12  
13 0 2 4 5 7 8 9 10 11 16  
14  
15  
16 0 2 4 5 7 8 9 10 11 13

Max Clique: 11

exact max clique 11  
--- 1.3751001358032227 seconds ---

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19  
0 1 2 4 5 8 11 14 15 18 3 11 3 4 9 8 18 9  
1 0 2 4 5 8 11 14 15 18 13 11 2 0 16 13 18  
2 0 1 4 5 8 11 14 15 18 1 3 9 14 0  
3 3 9 8 9 12  
4 0 1 2 5 8 11 14 15 18 5 2 9 16  
5 0 1 2 4 8 11 14 15 18 1 15 18 9  
6 4 0 3  
7 7 8  
8 0 1 2 4 5 11 14 15 18

9  
10  
11 0 1 2 4 5 8 14 15 18  
12  
13  
14 0 1 2 4 5 8 11 15 18  
15 0 1 2 4 5 8 11 14 18  
16  
17  
18 0 1 2 4 5 8 11 14 15

exact max clique 10  
--- 2.2993600368499756 seconds ---

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21  
0 1 3 4 7 8 9 10 11 12 13 14 18 19 20 1 8 6 19 20 0  
1 0 3 4 7 8 9 10 11 12 13 14 18 19 20 18 0 15 20  
2 18 11 19 20  
3 0 1 4 7 8 9 10 11 12 13 14 18 19 20 6 1 5 16  
4 0 1 3 7 8 9 10 11 12 13 14 18 19 20 17 0  
5 11 12  
6 16 13  
7 0 1 3 4 8 9 10 11 12 13 14 18 19 20 17 6  
8 0 1 3 4 7 9 10 11 12 13 14 18 19 20 8  
9 0 1 3 4 7 8 10 11 12 13 14 18 19 20 0  
10 0 1 3 4 7 8 9 11 12 13 14 18 19 20 8  
11 0 1 3 4 7 8 9 10 12 13 14 18 19 20  
12 0 1 3 4 7 8 9 10 11 13 14 18 19 20  
13 0 1 3 4 7 8 9 10 11 12 14 18 19 20  
14 0 1 3 4 7 8 9 10 11 12 13 18 19 20  
15  
16  
17  
18 0 1 3 4 7 8 9 10 11 12 13 14 19 20  
19 0 1 3 4 7 8 9 10 11 12 13 14 18 20  
20 0 1 3 4 7 8 9 10 11 12 13 14 18 19

21

0 1 3 4 7 8 9 10 11 12 13 14 18 19 20 1 8 6 19 20 0

1 0 3 4 7 8 9 10 11 12 13 14 18 19 20 18 0 15 20

2 18 11 19 20

3 0 1 4 7 8 9 10 11 12 13 14 18 19 20 6 1 5 16

4 0 1 3 7 8 9 10 11 12 13 14 18 19 20 17 0

5 11 12

6 16 13

7 0 1 3 4 8 9 10 11 12 13 14 18 19 20 17 6

8 0 1 3 4 7 9 10 11 12 13 14 18 19 20 8

9 0 1 3 4 7 8 10 11 12 13 14 18 19 20 0

10 0 1 3 4 7 8 9 11 12 13 14 18 19 20 8

11 0 1 3 4 7 8 9 10 12 13 14 18 19 20

12 0 1 3 4 7 8 9 10 11 13 14 18 19 20

13 0 1 3 4 7 8 9 10 11 12 14 18 19 20

14 0 1 3 4 7 8 9 10 11 12 13 18 19 20

15

16

17

18 0 1 3 4 7 8 9 10 11 12 13 14 19 20

19 0 1 3 4 7 8 9 10 11 12 13 14 18 20

20 0 1 3 4 7 8 9 10 11 12 13 14 18 19

exact max clique 15

--- 9.7825767993927 seconds ---

---

23

0 9 2 2 10 11 8 10 19 16 20 8 12

1 22 20 20 22 22 2 14 19 0 5

2 18 3 10 1 12 21 16 17

3 20 12 22 15 12 0 17 14

4 8 3 8 0 19 1 4

5 12 4 21 3 8

6 12 13 2 22 13

7 20

8

9

10 11 13 14 16 17 18 19 21 22

11 10 13 14 16 17 18 19 21 22

12  
13 10 11 14 16 17 18 19 21 22  
14 10 11 13 16 17 18 19 21 22  
15  
16 10 11 13 14 17 18 19 21 22  
17 10 11 13 14 16 18 19 21 22  
18 10 11 13 14 16 17 19 21 22  
19 10 11 13 14 16 17 18 21 22  
20  
21 10 11 13 14 16 17 18 19 22  
22 10 11 13 14 16 17 18 19 21

exact max clique 10  
--- 19.36954379081726 seconds ---

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25  
0 1 3 4 5 6 7 8 9 10 11 12 14 15 16 17 18 19 22 23 24 16 3 4 23  
1 0 3 4 5 6 7 8 9 10 11 12 14 15 16 17 18 19 22 23 24 8 21 5 21  
2 9 6 10 6  
3 0 1 4 5 6 7 8 9 10 11 12 14 15 16 17 18 19 22 23 24 4 18 8 9  
4 0 1 3 5 6 7 8 9 10 11 12 14 15 16 17 18 19 22 23 24 8 9 2  
5 0 1 3 4 6 7 8 9 10 11 12 14 15 16 17 18 19 22 23 24 21 0 6  
6 0 1 3 4 5 7 8 9 10 11 12 14 15 16 17 18 19 22 23 24 17 12 21  
7 0 1 3 4 5 6 8 9 10 11 12 14 15 16 17 18 19 22 23 24 1 19 8  
8 0 1 3 4 5 6 7 9 10 11 12 14 15 16 17 18 19 22 23 24 6 19 5  
9 0 1 3 4 5 6 7 8 10 11 12 14 15 16 17 18 19 22 23 24 16 14 12  
10 0 1 3 4 5 6 7 8 9 11 12 14 15 16 17 18 19 22 23 24 22 8  
11 0 1 3 4 5 6 7 8 9 10 12 14 15 16 17 18 19 22 23 24 5 9  
12 0 1 3 4 5 6 7 8 9 10 11 14 15 16 17 18 19 22 23 24 20 4  
13 1  
14 0 1 3 4 5 6 7 8 9 10 11 12 15 16 17 18 19 22 23 24 1  
15 0 1 3 4 5 6 7 8 9 10 11 12 14 16 17 18 19 22 23 24 17  
16 0 1 3 4 5 6 7 8 9 10 11 12 14 15 17 18 19 22 23 24 10  
17 0 1 3 4 5 6 7 8 9 10 11 12 14 15 16 18 19 22 23 24 19  
18 0 1 3 4 5 6 7 8 9 10 11 12 14 15 16 17 19 22 23 24  
19 0 1 3 4 5 6 7 8 9 10 11 12 14 15 16 17 18 22 23 24  
20

21

22 0 1 3 4 5 6 7 8 9 10 11 12 14 15 16 17 18 19 23 24

23 0 1 3 4 5 6 7 8 9 10 11 12 14 15 16 17 18 19 22 24

24 0 1 3 4 5 6 7 8 9 10 11 12 14 15 16 17 18 19 22 23

exact max clique 21

--- 191.8830749988556 seconds ---

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27

0 17 12 9 2 21 26 7 17 14 20

1 3 4 7 9 10 11 13 15 17 19 20 21 22 25 26 12 10 24 20 21 2 17 9 15 4

2 14 11 3 18 4 15 19 3

3 1 4 7 9 10 11 13 15 17 19 20 21 22 25 26 1 23 24 26 13 26 23 9

4 1 3 7 9 10 11 13 15 17 19 20 21 22 25 26 15 25 22 0 18 19 1 2

5 16 20 13 9 5 22 4

6 19 2 11 7 9 10 9

7 1 3 4 9 10 11 13 15 17 19 20 21 22 25 26 5 20 1 26 14 14

8 2 8 21 5

9 1 3 4 7 10 11 13 15 17 19 20 21 22 25 26 5 23 26

10 1 3 4 7 9 11 13 15 17 19 20 21 22 25 26 2 13

11 1 3 4 7 9 10 13 15 17 19 20 21 22 25 26 8

12 10

13 1 3 4 7 9 10 11 15 17 19 20 21 22 25 26 2

14

15 1 3 4 7 9 10 11 13 17 19 20 21 22 25 26

16

17 1 3 4 7 9 10 11 13 15 19 20 21 22 25 26

18

19 1 3 4 7 9 10 11 13 15 17 20 21 22 25 26

20 1 3 4 7 9 10 11 13 15 17 19 21 22 25 26

21 1 3 4 7 9 10 11 13 15 17 19 20 22 25 26

22 1 3 4 7 9 10 11 13 15 17 19 20 21 25 26

23

24

25 1 3 4 7 9 10 11 13 15 17 19 20 21 22 26

26 1 3 4 7 9 10 11 13 15 17 19 20 21 22 25

exact max clique 16

--- 302.8389298915863 seconds ---



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28

0 26 18 20 18 19 4 15 20 13 21

1 4 7 8 9 10 12 14 15 16 17 19 20 21 23 24 27 27 4 1 26 7 0 26 21 24

2 24 15 16 21 26 24 11 7

3 4 23 15 6 0 6 27

4 1 7 8 9 10 12 14 15 16 17 19 20 21 23 24 27 4 11 18 17 22 18 18

5 11 15 9 19 15

6 6 1 23 11 13

7 1 4 8 9 10 12 14 15 16 17 19 20 21 23 24 27 8 26 19 25 8

8 1 4 7 9 10 12 14 15 16 17 19 20 21 23 24 27 20 24 4 3 3

9 1 4 7 8 10 12 14 15 16 17 19 20 21 23 24 27 14 20 27 20 9

10 1 4 7 8 9 12 14 15 16 17 19 20 21 23 24 27 5 13 21 14 17

11 18 10 22 11

12 1 4 7 8 9 10 14 15 16 17 19 20 21 23 24 27 22 17 16

13 22

14 1 4 7 8 9 10 12 15 16 17 19 20 21 23 24 27

15 1 4 7 8 9 10 12 14 16 17 19 20 21 23 24 27

16 1 4 7 8 9 10 12 14 15 17 19 20 21 23 24 27

17 1 4 7 8 9 10 12 14 15 16 19 20 21 23 24 27

18

19 1 4 7 8 9 10 12 14 15 16 17 20 21 23 24 27

20 1 4 7 8 9 10 12 14 15 16 17 19 21 23 24 27

21 1 4 7 8 9 10 12 14 15 16 17 19 20 23 24 27

22

23 1 4 7 8 9 10 12 14 15 16 17 19 20 21 24 27

24 1 4 7 8 9 10 12 14 15 16 17 19 20 21 23 27

25

26

27 1 4 7 8 9 10 12 14 15 16 17 19 20 21 23 24

exact max clique 17

--- 568.4367382526398 seconds ---

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29  
0 27 17 21 15 18 24 18 23 4 7 17 27 19 3 22 12 5  
1 6 26 12 19 21 21 13 21 26 25 23 6 14  
2 6 12 13 16 19 20 27 15 3 9 17 3 24 10  
3 0 27 28 0  
4 1 20  
5  
6 2 12 13 16 19 20  
7  
8  
9  
10  
11  
12 2 6 13 16 19 20  
13 2 6 12 16 19 20  
14  
15  
16 2 6 12 13 19 20  
17  
18  
19 2 6 12 13 16 20  
20 2 6 12 13 16 19  
21  
22  
23  
24  
25  
26  
27  
28

exact max clique 7  
--- 1767.2481849193573 seconds ---

