

\*\*\*\*\* reading edge list \*\*\*\*\*

```
( 1, 17) ( 2, 17) ( 3, 17) ( 4, 17) ( 5, 17) ( 6, 17) ( 7, 17)
( 8, 17) ( 9, 17) (10, 17) (11, 17) (12, 17) (13, 17) (14, 17)
(15, 17) (16, 17) (16,  1) (16,  2) (16,  3) (16,  4) (16,  5)
(16,  6) (16,  7) (16,  8) (16,  9) (16, 10) (16, 11) (16, 12)
(16, 13) (16, 14) (16, 15) (15,  1) (15,  2) (15,  3) (15,  4)
(15,  5) (15,  6) (15,  7) (15,  8) (15,  9) (15, 10) (15, 11)
(15, 12) (15, 13) (15, 14) (14,  1) (14,  2) (14,  3) (14,  4)
(14,  5) (14,  6) (14,  7) (14,  8) (14,  9) (14, 10) (14, 11)
(14, 12) (14, 13) (13,  1) (13,  2) (13,  3) (13,  4) (13,  5)
(13,  6) (13,  7) (13,  8) (13,  9) (13, 10) (13, 11) (13, 12)
(12,  1) (12,  2) (12,  3) (12,  4) (12,  5) (12,  6) (12,  7)
(12,  8) (12,  9) (12, 10) (12, 11) (11,  1) (11,  2) (11,  3)
(11,  4) (11,  5) (11,  6) (11,  7) (11,  8) (11,  9) (11, 10)
( 1,  2) ( 1,  3) ( 1,  4) ( 1,  5) ( 1,  6) ( 1,  7) ( 1,  9)
( 1,  8) ( 1, 10) ( 2,  3) ( 2,  4) ( 2,  5) ( 2,  6) ( 2,  7)
( 2,  8) ( 2,  9) ( 2, 10) ( 3,  4) ( 3,  5) ( 3,  6) ( 3,  7)
( 3,  8) ( 3,  9) ( 3, 10) ( 4,  5) ( 4,  6) ( 4,  7) ( 4,  8)
( 4,  9) ( 4, 10) ( 5,  6) ( 5,  7) ( 5,  8) ( 5,  9) ( 5, 10)
( 6,  7) ( 6,  8) ( 6,  9) ( 6, 10) ( 7,  8) ( 7,  9) ( 7, 10)
( 8,  9) ( 8, 10) ( 9, 10)
```

VERTICES = 17 EDGES = 136

|                          |                          |
|--------------------------|--------------------------|
|                          | 1307674368000 $x^1 y^0$  |
| 4339163001600 $x^2 y^0$  | 6165817614720 $x^3 y^0$  |
| 5056995703824 $x^4 y^0$  | 2706813345600 $x^5 y^0$  |
| 1009672107080 $x^6 y^0$  | 272803210680 $x^7 y^0$   |
| 54631129553 $x^8 y^0$    | 8207628000 $x^9 y^0$     |
| 928095740 $x^{10} y^0$   | 78558480 $x^{11} y^0$    |
| 4899622 $x^{12} y^0$     | 218400 $x^{13} y^0$      |
| 6580 $x^{14} y^0$        | 120 $x^{15} y^0$         |
| 1 $x^{16} y^0$           |                          |
| 1307674368000 $x^0 y^1$  | 16437193920000 $x^1 y^1$ |
| 40694406825600 $x^2 y^1$ | 47050287302592 $x^3 y^1$ |
| 31923475759488 $x^4 y^1$ | 14110841071600 $x^5 y^1$ |
| 4300125666200 $x^6 y^1$  | 932610014336 $x^7 y^1$   |
| 146239975024 $x^8 y^1$   | 16630373760 $x^9 y^1$    |
| 1358248320 $x^{10} y^1$  | 77622272 $x^{11} y^1$    |
| 2945488 $x^{12} y^1$     | 66640 $x^{13} y^1$       |
| 680 $x^{14} y^1$         |                          |

13405705286400  $x^0 y^2$   
 186591562669152  $x^2 y^2$   
 100894579510712  $x^4 y^2$   
 9197896175468  $x^6 y^2$   
 195237081468  $x^8 y^2$   
 965544580  $x^{10} y^2$   
 773500  $x^{12} y^2$

69645778508160  $x^0 y^3$   
 569071385034048  $x^2 y^3$   
 217085105413176  $x^4 y^3$   
 13657461317500  $x^6 y^3$   
 188287999900  $x^8 y^3$   
 561220660  $x^{10} y^3$   
 278460  $x^{12} y^3$

246373355707920  $x^0 y^4$   
 1318840238486680  $x^2 y^4$   
 363479003077190  $x^4 y^4$   
 16235073444590  $x^6 y^4$   
 152959857050  $x^8 y^4$   
 293543250  $x^{10} y^4$   
 61880  $x^{12} y^4$

671792343418560  $x^0 y^5$   
 2506429320744440  $x^2 y^5$   
 511408146641392  $x^4 y^5$   
 16760043640340  $x^6 y^5$   
 114050792856  $x^8 y^5$   
 156216060  $x^{10} y^5$   
 24752  $x^{12} y^5$

1513420978578600  $x^0 y^6$   
 4104711916836076  $x^2 y^6$   
 635531034732594  $x^4 y^6$   
 15816468041374  $x^6 y^6$   
 81826482738  $x^8 y^6$   
 83553470  $x^{10} y^6$   
 6188  $x^{12} y^6$

95107825434240  $x^1 y^2$   
 178510496563776  $x^3 y^2$   
 36934082745560  $x^5 y^2$   
 1597961557764  $x^7 y^2$   
 16649773140  $x^9 y^2$   
 36045100  $x^{11} y^2$   
 7140  $x^{13} y^2$

354027782867904  $x^1 y^3$   
 456781782740192  $x^3 y^3$   
 66395860571040  $x^5 y^3$   
 1929929621620  $x^7 y^3$   
 12569777220  $x^9 y^3$   
 16119740  $x^{11} y^3$   
 2380  $x^{13} y^3$

979394630753280  $x^1 y^4$   
 899534108378360  $x^3 y^4$   
 94047143950760  $x^5 y^4$   
 1906761656800  $x^7 y^4$   
 8288640360  $x^9 y^4$   
 6249880  $x^{11} y^4$

2184627041607920  $x^1 y^5$   
 1470460340357008  $x^3 y^5$   
 113573637197020  $x^5 y^5$   
 1675834023864  $x^7 y^5$   
 5227282060  $x^9 y^5$   
 2821728  $x^{11} y^5$

4140565675417080  $x^1 y^6$   
 2096085488637140  $x^3 y^6$   
 123013610339620  $x^5 y^6$   
 1378426077028  $x^7 y^6$   
 3264881620  $x^9 y^6$   
 1200472  $x^{11} y^6$

2945170220024760  $x^0 y^7$   
 5996564874807260  $x^2 y^7$   
 721771605822696  $x^4 y^7$   
 14081551640156  $x^6 y^7$   
 57268078296  $x^8 y^7$   
 42591120  $x^{10} y^7$

5106392662363265  $x^0 y^8$   
 8013955365284154  $x^2 y^8$   
 767271301186533  $x^4 y^8$   
 12068814097340  $x^6 y^8$   
 39752830260  $x^8 y^8$   
 22754160  $x^{10} y^8$

8068004242661480  $x^0 y^9$   
 9983349701330720  $x^2 y^9$   
 776621954519840  $x^4 y^9$   
 10089400741420  $x^6 y^9$   
 27447691700  $x^8 y^9$   
 11571560  $x^{10} y^9$

11815603609629430  $x^0 y^{10}$   
 11759584186593672  $x^2 y^{10}$   
 757748375125742  $x^4 y^{10}$   
 8290905731108  $x^6 y^{10}$   
 18769478728  $x^8 y^{10}$   
 5445440  $x^{10} y^{10}$

16251578838818960  $x^0 y^{11}$   
 13242358666182100  $x^2 y^{11}$   
 719022203995004  $x^4 y^{11}$   
 6728380478456  $x^6 y^{11}$   
 12727218504  $x^8 y^{11}$   
 2450448  $x^{10} y^{11}$

21211994744738525  $x^0 y^{12}$   
 14378084550516414  $x^2 y^{12}$   
 667804191547311  $x^4 y^{12}$   
 5408893214088  $x^6 y^{12}$   
 8557066518  $x^8 y^{12}$   
 1089088  $x^{10} y^{12}$

6914881630461168  $x^1 y^7$   
 2696172880116716  $x^3 y^7$   
 123579185649920  $x^5 y^7$   
 1089168388308  $x^7 y^7$   
 1996434440  $x^9 y^7$   
 433160  $x^{11} y^7$

10447613132853312  $x^1 y^8$   
 3207414887764516  $x^3 y^8$   
 117779181139620  $x^5 y^8$   
 840946057380  $x^7 y^8$   
 1233051820  $x^9 y^8$   
 185640  $x^{11} y^8$

14566270500290860  $x^1 y^9$   
 3593185114427480  $x^3 y^9$   
 108160172140020  $x^5 y^9$   
 640619988580  $x^7 y^9$   
 755214460  $x^9 y^9$   
 61880  $x^{11} y^9$

19026553156993980  $x^1 y^{10}$   
 3842075646380972  $x^3 y^{10}$   
 96718201019440  $x^5 y^{10}$   
 483016926392  $x^7 y^{10}$   
 451971520  $x^9 y^{10}$   
 12376  $x^{11} y^{10}$

23560064934286972  $x^1 y^{11}$   
 3960963894313972  $x^3 y^{11}$   
 84813068773160  $x^5 y^{11}$   
 361223806944  $x^7 y^{11}$   
 266145880  $x^9 y^{11}$

27914937380807568  $x^1 y^{12}$   
 3967322416417360  $x^3 y^{12}$   
 73288786271974  $x^5 y^{12}$   
 268281377364  $x^7 y^{12}$   
 154344190  $x^9 y^{12}$

26491369407927788  $x^0 y^{13}$   
 15152944819558924  $x^2 y^{13}$   
 609919657035038  $x^4 y^{13}$   
 4313540971740  $x^6 y^{13}$   
 5667171510  $x^8 y^{13}$   
 408408  $x^{10} y^{13}$

31882788905715412  $x^1 y^{13}$   
 3883048843264836  $x^3 y^{13}$   
 62610157363754  $x^5 y^{13}$   
 197656198740  $x^7 y^{13}$   
 85935850  $x^9 y^{13}$

31868763565675428  $x^0 y^{14}$   
 15582402959565320  $x^2 y^{14}$   
 549631857268560  $x^4 y^{14}$   
 3413560850700  $x^6 y^{14}$   
 3680047800  $x^8 y^{14}$   
 116688  $x^{10} y^{14}$

35311545870237260  $x^1 y^{14}$   
 3730310738893780  $x^3 y^{14}$   
 52986085296144  $x^5 y^{14}$   
 144165981960  $x^7 y^{14}$   
 45605560  $x^9 y^{14}$

37130495156825708  $x^0 y^{15}$   
 15700612572114500  $x^2 y^{15}$   
 489870564332864  $x^4 y^{15}$   
 2680134208752  $x^6 y^{15}$   
 2341636440  $x^8 y^{15}$   
 19448  $x^{10} y^{15}$

38106968858768116  $x^1 y^{15}$   
 3529186159607420  $x^3 y^{15}$   
 44473572006864  $x^5 y^{15}$   
 103973208768  $x^7 y^{15}$   
 23143120  $x^9 y^{15}$

42087018130465878  $x^0 y^{16}$   
 15551546017463118  $x^2 y^{16}$   
 432538581620288  $x^4 y^{16}$   
 2086966309428  $x^6 y^{16}$   
 1458308280  $x^8 y^{16}$

40226793436075014  $x^1 y^{16}$   
 3296641279916842  $x^3 y^{16}$   
 37046272082820  $x^5 y^{16}$   
 74066132712  $x^7 y^{16}$   
 11231220  $x^9 y^{16}$

46583367428716702  $x^0 y^{17}$   
 15182439483156634  $x^2 y^{17}$   
 378786076480812  $x^4 y^{17}$   
 1610591662680  $x^6 y^{17}$   
 885224340  $x^8 y^{17}$

41671101130736806  $x^1 y^{17}$   
 3046329374634546  $x^3 y^{17}$   
 30632959577220  $x^5 y^{17}$   
 52029137160  $x^7 y^{17}$   
 5105100  $x^9 y^{17}$

50503801116524210  $x^0 y^{18}$   
 14639411287296978  $x^2 y^{18}$   
 329228889865876  $x^4 y^{18}$   
 1230685776320  $x^6 y^{18}$   
 520039520  $x^8 y^{18}$

42471608423554674  $x^1 y^{18}$   
 2788812156572442  $x^3 y^{18}$   
 25141308212020  $x^5 y^{18}$   
 35963047120  $x^7 y^{18}$   
 2042040  $x^9 y^{18}$

53771878220743410  $x^0 y^{19}$   
 13964829649500730  $x^2 y^{19}$   
 284122328750260  $x^4 y^{19}$   
 930264935600  $x^6 y^{19}$   
 294734440  $x^8 y^{19}$

42681546485315010  $x^1 y^{19}$   
 2531978197198450  $x^3 y^{19}$   
 20474180186460  $x^5 y^{19}$   
 24424159760  $x^7 y^{19}$   
 680680  $x^9 y^{19}$

|                                |                                |
|--------------------------------|--------------------------------|
| 56347362232057260 $x^0 y^{20}$ | 42367004448087956 $x^1 y^{20}$ |
| 13195987463246588 $x^2 y^{20}$ | 2281533324418348 $x^3 y^{20}$  |
| 243492742222730 $x^4 y^{20}$   | 16537937586170 $x^5 y^{20}$    |
| 695110756340 $x^6 y^{20}$      | 16282614348 $x^7 y^{20}$       |
| 160810650 $x^8 y^{20}$         | 170170 $x^9 y^{20}$            |
| 58221226429448628 $x^0 y^{21}$ | 41600068703346036 $x^1 y^{21}$ |
| 12364686889409140 $x^2 y^{21}$ | 2041474278401844 $x^3 y^{21}$  |
| 207225746589290 $x^4 y^{21}$   | 13244659834406 $x^5 y^{21}$    |
| 513095426844 $x^6 y^{21}$      | 10641683052 $x^7 y^{21}$       |
| 84088290 $x^8 y^{21}$          | 24310 $x^9 y^{21}$             |
| 59409798600523436 $x^0 y^{22}$ | 40453746309343172 $x^1 y^{22}$ |
| 11497394753542152 $x^2 y^{22}$ | 1814494226244388 $x^3 y^{22}$  |
| 175121166047880 $x^4 y^{22}$   | 10512525408112 $x^5 y^{22}$    |
| 373867357500 $x^6 y^{22}$      | 6804952440 $x^7 y^{22}$        |
| 41715960 $x^8 y^{22}$          |                                |
| 59948806741226988 $x^0 y^{23}$ | 38998465159766060 $x^1 y^{23}$ |
| 10615710917590220 $x^2 y^{23}$ | 1602307541403140 $x^3 y^{23}$  |
| 146927509241760 $x^4 y^{23}$   | 8266035496992 $x^5 y^{23}$     |
| 268688096040 $x^6 y^{23}$      | 4246276320 $x^7 y^{23}$        |
| 19253520 $x^8 y^{23}$          |                                |
| 59887828622998883 $x^0 y^{24}$ | 37299863239021630 $x^1 y^{24}$ |
| 9736975493206845 $x^2 y^{24}$  | 1405900503546630 $x^3 y^{24}$  |
| 122364180605940 $x^4 y^{24}$   | 6436223785992 $x^5 y^{24}$     |
| 190290560460 $x^6 y^{24}$      | 2578221360 $x^7 y^{24}$        |
| 8022300 $x^8 y^{24}$           |                                |
| 59285435453290878 $x^0 y^{25}$ | 35417570649205940 $x^1 y^{25}$ |
| 8874904018335992 $x^2 y^{25}$  | 1225718861504046 $x^3 y^{25}$  |
| 101135703949280 $x^4 y^{25}$   | 4960653850152 $x^5 y^{25}$     |
| 132700744176 $x^6 y^{25}$      | 1519511136 $x^7 y^{25}$        |
| 2917200 $x^8 y^{25}$           |                                |
| 58205159818045097 $x^0 y^{26}$ | 33404712489756376 $x^1 y^{26}$ |
| 8040181659695017 $x^2 y^{26}$  | 1061803198245398 $x^3 y^{26}$  |
| 82940518523940 $x^4 y^{26}$    | 3783177850452 $x^5 y^{26}$     |
| 91043128176 $x^6 y^{26}$       | 866758464 $x^7 y^{26}$         |
| 875160 $x^8 y^{26}$            |                                |

|                                |                                |
|--------------------------------|--------------------------------|
| 56712304713563046 $x^0 y^{27}$ | 31307897621588510 $x^1 y^{27}$ |
| 7240978176722766 $x^2 y^{27}$  | 913884292721246 $x^3 y^{27}$   |
| 67476927254660 $x^4 y^{27}$    | 2853731772892 $x^5 y^{27}$     |
| 61389167840 $x^6 y^{27}$       | 476476000 $x^7 y^{27}$         |
| 194480 $x^8 y^{27}$            |                                |
| 54871535136219088 $x^0 y^{28}$ | 29167502287061900 $x^1 y^{28}$ |
| 6483371431593580 $x^2 y^{28}$  | 781451805614480 $x^3 y^{28}$   |
| 54448201363270 $x^4 y^{28}$    | 2128232057952 $x^5 y^{28}$     |
| 40630810220 $x^6 y^{28}$       | 250781960 $x^7 y^{28}$         |
| 24310 $x^8 y^{28}$             |                                |
| 52745149588059108 $x^0 y^{29}$ | 27018105924717260 $x^1 y^{29}$ |
| 5771686596871520 $x^2 y^{29}$  | 663807446227640 $x^3 y^{29}$   |
| 43567426811480 $x^4 y^{29}$    | 1568426531672 $x^5 y^{29}$     |
| 26355929600 $x^6 y^{29}$       | 125147880 $x^7 y^{29}$         |
| 50391910037778828 $x^0 y^{30}$ | 24888983292621072 $x^1 y^{30}$ |
| 5108767678677520 $x^2 y^{30}$  | 560109504208540 $x^3 y^{30}$   |
| 34561834813220 $x^4 y^{30}$    | 1141614646172 $x^5 y^{30}$     |
| 16726758048 $x^6 y^{30}$       | 58402344 $x^7 y^{30}$          |
| 47866308715326608 $x^0 y^{31}$ | 22804595867974128 $x^1 y^{31}$ |
| 4496199199557780 $x^2 y^{31}$  | 469411999956900 $x^3 y^{31}$   |
| 27176269820700 $x^4 y^{31}$    | 820235668252 $x^5 y^{31}$      |
| 10366620264 $x^6 y^{31}$       | 25029576 $x^7 y^{31}$          |
| 45218161719664336 $x^0 y^{32}$ | 20785053772028000 $x^1 y^{32}$ |
| 3934493046443960 $x^2 y^{32}$  | 390699693223840 $x^3 y^{32}$   |
| 21175658704200 $x^4 y^{32}$    | 581372463672 $x^5 y^{32}$      |
| 6260894640 $x^6 y^{32}$        | 9626760 $x^7 y^{32}$           |
| 42492436949616576 $x^0 y^{33}$ | 18846538080238960 $x^1 y^{33}$ |
| 3423251743777320 $x^2 y^{33}$  | 322919385162920 $x^3 y^{33}$   |
| 16346542823520 $x^4 y^{33}$    | 406225764672 $x^5 y^{33}$      |
| 3675115080 $x^6 y^{33}$        | 3208920 $x^7 y^{33}$           |
| 39729243228409176 $x^0 y^{34}$ | 17001684575744960 $x^1 y^{34}$ |
| 2961316009864940 $x^2 y^{34}$  | 265007671748820 $x^3 y^{34}$   |
| 12497816813300 $x^4 y^{34}$    | 279597657612 $x^5 y^{34}$      |
| 2089563840 $x^6 y^{34}$        | 875160 $x^7 y^{34}$            |

|                                |                                |
|--------------------------------|--------------------------------|
| 36963926118428816 $x^0 y^{35}$ | 15259935783764776 $x^1 y^{35}$ |
| 2546901483595924 $x^2 y^{35}$  | 215915089508924 $x^3 y^{35}$   |
| 9460771227180 $x^4 y^{35}$     | 189389612412 $x^5 y^{35}$      |
| 1145584440 $x^6 y^{35}$        | 175032 $x^7 y^{35}$            |
| 34227232251665856 $x^0 y^{36}$ | 13627869855414152 $x^1 y^{36}$ |
| 2177726856693024 $x^2 y^{36}$  | 174626395100352 $x^3 y^{36}$   |
| 7088500779360 $x^4 y^{36}$     | 126119385392 $x^5 y^{36}$      |
| 601993392 $x^6 y^{36}$         | 19448 $x^7 y^{36}$             |
| 31545517119866464 $x^0 y^{37}$ | 12109513748994584 $x^1 y^{37}$ |
| 1851133589508112 $x^2 y^{37}$  | 140176754086824 $x^3 y^{37}$   |
| 5254781532000 $x^4 y^{37}$     | 82470099712 $x^5 y^{37}$       |
| 300860560 $x^6 y^{37}$         |                                |
| 28940980862585064 $x^0 y^{38}$ | 10706645562616640 $x^1 y^{38}$ |
| 1564196259615080 $x^2 y^{38}$  | 111663843791500 $x^3 y^{38}$   |
| 385255546840 $x^4 y^{38}$      | 52883322492 $x^5 y^{38}$       |
| 141581440 $x^6 y^{38}$         |                                |
| 26431922931234184 $x^0 y^{39}$ | 9419088062727280 $x^1 y^{39}$  |
| 1313822311753420 $x^2 y^{39}$  | 88256119337540 $x^3 y^{39}$    |
| 2792166560260 $x^4 y^{39}$     | 33203502332 $x^5 y^{39}$       |
| 61941880 $x^6 y^{39}$          |                                |
| 24033010248525579 $x^0 y^{40}$ | 8244993184882818 $x^1 y^{40}$  |
| 1096840211515615 $x^2 y^{40}$  | 69197659292608 $x^3 y^{40}$    |
| 1999473152600 $x^4 y^{40}$     | 20375747392 $x^5 y^{40}$       |
| 24776752 $x^6 y^{40}$          |                                |
| 21755555388910994 $x^0 y^{41}$ | 7181115802751548 $x^1 y^{41}$  |
| 910075443611026 $x^2 y^{41}$   | 53810085873544 $x^3 y^{41}$    |
| 1413939126600 $x^4 y^{41}$     | 12194654472 $x^5 y^{41}$       |
| 8848840 $x^6 y^{41}$           |                                |
| 19607802053569247 $x^0 y^{42}$ | 6223074309410298 $x^1 y^{42}$  |
| 750414245928919 $x^2 y^{42}$   | 41492063947048 $x^3 y^{42}$    |
| 986772266480 $x^4 y^{42}$      | 7099083992 $x^5 y^{42}$        |
| 2722720 $x^6 y^{42}$           |                                |
| 17595215216451352 $x^0 y^{43}$ | 5365595352139400 $x^1 y^{43}$  |
| 614855343817000 $x^2 y^{43}$   | 31716852481600 $x^3 y^{43}$    |
| 679159360880 $x^4 y^{43}$      | 4006754752 $x^5 y^{43}$        |
| 680680 $x^6 y^{43}$            |                                |

|                                |                               |
|--------------------------------|-------------------------------|
| 15720773125227092 $x^0 y^{44}$ | 4602740226384820 $x^1 y^{44}$ |
| 500550242778040 $x^2 y^{44}$   | 24028350280480 $x^3 y^{44}$   |
| 460633544280 $x^4 y^{44}$      | 2183646192 $x^5 y^{44}$       |
| 123760 $x^6 y^{44}$            |                               |
| 13985258077052132 $x^0 y^{45}$ | 3928110844989708 $x^1 y^{45}$ |
| 404832886787056 $x^2 y^{45}$   | 18036053515480 $x^3 y^{45}$   |
| 307600715240 $x^4 y^{45}$      | 1143381512 $x^5 y^{45}$       |
| 12376 $x^6 y^{45}$             |                               |
| 12387542696620312 $x^0 y^{46}$ | 3335033774880912 $x^1 y^{46}$ |
| 325239695209884 $x^2 y^{46}$   | 134093308501680 $x^3 y^{46}$  |
| 202040025460 $x^4 y^{46}$      | 571635064 $x^5 y^{46}$        |
| 10924868403219888 $x^0 y^{47}$ | 2816721492670280 $x^1 y^{47}$ |
| 259521132754520 $x^2 y^{47}$   | 9871194504080 $x^3 y^{47}$    |
| 130382211960 $x^4 y^{47}$      | 270774504 $x^5 y^{47}$        |
| 9593112888831758 $x^0 y^{48}$  | 2366410670812110 $x^1 y^{48}$ |
| 205646035926240 $x^2 y^{48}$   | 7192314194520 $x^3 y^{48}$    |
| 82560357880 $x^4 y^{48}$       | 120344224 $x^5 y^{48}$        |
| 8387043723023238 $x^0 y^{49}$  | 1977477905353730 $x^1 y^{49}$ |
| 161799923588680 $x^2 y^{49}$   | 5184710582480 $x^3 y^{49}$    |
| 51221170000 $x^4 y^{49}$       | 49553504 $x^5 y^{49}$         |
| 7300555612463048 $x^0 y^{50}$  | 1643533800848888 $x^1 y^{50}$ |
| 126378473319644 $x^2 y^{50}$   | 3696074070260 $x^3 y^{50}$    |
| 31080869820 $x^4 y^{50}$       | 18582564 $x^5 y^{50}$         |
| 6326889327813080 $x^0 y^{51}$  | 1358496726788136 $x^1 y^{51}$ |
| 97977265440236 $x^2 y^{51}$    | 2604354853100 $x^3 y^{51}$    |
| 18407969580 $x^4 y^{51}$       | 6194188 $x^5 y^{51}$          |
| 5458830828083932 $x^0 y^{52}$  | 1116647857434800 $x^1 y^{52}$ |
| 75378797070500 $x^2 y^{52}$    | 1812855410520 $x^3 y^{52}$    |
| 10615047520 $x^4 y^{52}$       | 1769768 $x^5 y^{52}$          |
| 4688889631476832 $x^0 y^{53}$  | 912669315229880 $x^1 y^{53}$  |
| 57537659074280 $x^2 y^{53}$    | 1245844834080 $x^3 y^{53}$    |
| 5942493480 $x^4 y^{53}$        | 408408 $x^5 y^{53}$           |
| 4009455981182692 $x^0 y^{54}$  | 741667369032000 $x^1 y^{54}$  |
| 43564653620180 $x^2 y^{54}$    | 844709245380 $x^3 y^{54}$     |
| 3218255040 $x^4 y^{54}$        | 68068 $x^5 y^{54}$            |

|                               |                              |
|-------------------------------|------------------------------|
| 3412936820083152 $x^0 y^{55}$ | 599182700283312 $x^1 y^{55}$ |
| 32710510826084 $x^2 y^{55}$   | 564629722020 $x^3 y^{55}$    |
| 1678959100 $x^4 y^{55}$       | 6188 $x^5 y^{55}$            |
| 2891871008551537 $x^0 y^{56}$ | 481189748254853 $x^1 y^{56}$ |
| 24349742924156 $x^2 y^{56}$   | 371761523640 $x^3 y^{56}$    |
| 839464080 $x^4 y^{56}$        |                              |
| 2439024585511501 $x^0 y^{57}$ | 384087087023315 $x^1 y^{57}$ |
| 17965058529600 $x^2 y^{57}$   | 240876032800 $x^3 y^{57}$    |
| 399744800 $x^4 y^{57}$        |                              |
| 2047467178318276 $x^0 y^{58}$ | 304680681560320 $x^1 y^{58}$ |
| 13132652272740 $x^2 y^{58}$   | 153419207760 $x^3 y^{58}$    |
| 179885160 $x^4 y^{58}$        |                              |
| 1710630908998856 $x^0 y^{59}$ | 240161729418000 $x^1 y^{59}$ |
| 9508589213760 $x^2 y^{59}$    | 95936709960 $x^3 y^{59}$     |
| 75741120 $x^4 y^{59}$         |                              |
| 1422353323304576 $x^0 y^{60}$ | 188080628985912 $x^1 y^{60}$ |
| 6816420632112 $x^2 y^{60}$    | 58815393000 $x^3 y^{60}$     |
| 29454880 $x^4 y^{60}$         |                              |
| 1176905987914592 $x^0 y^{61}$ | 146318435080480 $x^1 y^{61}$ |
| 4836098395128 $x^2 y^{61}$    | 35292701080 $x^3 y^{61}$     |
| 10395840 $x^4 y^{61}$         |                              |
| 969010464832800 $x^0 y^{62}$  | 113056976064240 $x^1 y^{62}$ |
| 3394198784340 $x^2 y^{62}$    | 20688959200 $x^3 y^{62}$     |
| 3248700 $x^4 y^{62}$          |                              |
| 793843386459240 $x^0 y^{63}$  | 86748620533120 $x^1 y^{63}$  |
| 2355422481880 $x^2 y^{63}$    | 11821891120 $x^3 y^{63}$     |
| 866320 $x^4 y^{63}$           |                              |
| 647032326400460 $x^0 y^{64}$  | 66086501188630 $x^1 y^{64}$  |
| 1615304195960 $x^2 y^{64}$    | 6567483520 $x^3 y^{64}$      |
| 185640 $x^4 y^{64}$           |                              |
| 524644096377830 $x^0 y^{65}$  | 49975833049794 $x^1 y^{65}$  |
| 1094041948104 $x^2 y^{65}$    | 3536251600 $x^3 y^{65}$      |
| 28560 $x^4 y^{65}$            |                              |

|                              |                             |
|------------------------------|-----------------------------|
| 423167005208456 $x^0 y^{66}$ | 37506806098424 $x^1 y^{66}$ |
| 731341218356 $x^2 y^{66}$    | 1838830840 $x^3 y^{66}$     |
| 2380 $x^4 y^{66}$            |                             |
| 339488498405096 $x^0 y^{67}$ | 27929391443000 $x^1 y^{67}$ |
| 482161667680 $x^2 y^{67}$    | 919413040 $x^3 y^{67}$      |
| 270869462998496 $x^0 y^{68}$ | 20630276809560 $x^1 y^{68}$ |
| 313252648800 $x^2 y^{68}$    | 439719280 $x^3 y^{68}$      |
| 214916337913016 $x^0 y^{69}$ | 15112042319960 $x^1 y^{69}$ |
| 200366821200 $x^2 y^{69}$    | 199872400 $x^3 y^{69}$      |
| 169552021239536 $x^0 y^{70}$ | 10974600950872 $x^1 y^{70}$ |
| 126047650560 $x^2 y^{70}$    | 85659600 $x^3 y^{70}$       |
| 132986416942392 $x^0 y^{71}$ | 7898858973720 $x^1 y^{71}$  |
| 77895286560 $x^2 y^{71}$     | 34263840 $x^3 y^{71}$       |
| 103687319010327 $x^0 y^{72}$ | 5632498761435 $x^1 y^{72}$  |
| 47225330880 $x^2 y^{72}$     | 12623520 $x^3 y^{72}$       |
| 80352194108667 $x^0 y^{73}$  | 3977747985965 $x^1 y^{73}$  |
| 28045563000 $x^2 y^{73}$     | 4207840 $x^3 y^{73}$        |
| 61881296923472 $x^0 y^{74}$  | 2780973602160 $x^1 y^{74}$  |
| 16286197200 $x^2 y^{74}$     | 1237600 $x^3 y^{74}$        |
| 47352437392832 $x^0 y^{75}$  | 1923924228616 $x^1 y^{75}$  |
| 9229278240 $x^2 y^{75}$      | 309400 $x^3 y^{75}$         |
| 35997617024668 $x^0 y^{76}$  | 1316438726720 $x^1 y^{76}$  |
| 5092105200 $x^2 y^{76}$      | 61880 $x^3 y^{76}$          |
| 27181663057848 $x^0 y^{77}$  | 890440161000 $x^1 y^{77}$   |
| 2727926760 $x^2 y^{77}$      | 8840 $x^3 y^{77}$           |
| 20382914388408 $x^0 y^{78}$  | 595041228400 $x^1 y^{78}$   |
| 1414481600 $x^2 y^{78}$      | 680 $x^3 y^{78}$            |
| 15175951582488 $x^0 y^{79}$  | 392598154360 $x^1 y^{79}$   |
| 707240800 $x^2 y^{79}$       |                             |

|                                                       |                           |
|-------------------------------------------------------|---------------------------|
| 11216314211198 $x^0 y^{80}$<br>339475584 $x^2 y^{80}$ | 255563637516 $x^1 y^{80}$ |
| 8227111184444 $x^0 y^{81}$<br>155592976 $x^2 y^{81}$  | 164004551044 $x^1 y^{81}$ |
| 5987402562104 $x^0 y^{82}$<br>67649120 $x^2 y^{82}$   | 103665849040 $x^1 y^{82}$ |
| 4322213204384 $x^0 y^{83}$<br>27674640 $x^2 y^{83}$   | 64477749600 $x^1 y^{83}$  |
| 3094028267804 $x^0 y^{84}$<br>10542720 $x^2 y^{84}$   | 39418224360 $x^1 y^{84}$  |
| 2195616649944 $x^0 y^{85}$<br>3689952 $x^2 y^{85}$    | 23656733112 $x^1 y^{85}$  |
| 1544029781880 $x^0 y^{86}$<br>1165248 $x^2 y^{86}$    | 13917758832 $x^1 y^{86}$  |
| 1075628498880 $x^0 y^{87}$<br>323680 $x^2 y^{87}$     | 8013896560 $x^1 y^{87}$   |
| 741999036805 $x^0 y^{88}$<br>76160 $x^2 y^{88}$       | 4507994125 $x^1 y^{88}$   |
| 506629579405 $x^0 y^{89}$<br>14280 $x^2 y^{89}$       | 2472167115 $x^1 y^{89}$   |
| 342230427880 $x^0 y^{90}$<br>1904 $x^2 y^{90}$        | 1318496744 $x^1 y^{90}$   |
| 228593118136 $x^0 y^{91}$<br>136 $x^2 y^{91}$         | 681982064 $x^1 y^{91}$    |
| 150896139976 $x^0 y^{92}$                             | 340991100 $x^1 y^{92}$    |
| 98376901996 $x^0 y^{93}$                              | 164180900 $x^1 y^{93}$    |
| 63300930176 $x^0 y^{94}$                              | 75775800 $x^1 y^{94}$     |
| 40169776136 $x^0 y^{95}$                              | 33341352 $x^1 y^{95}$     |

|                          |                       |
|--------------------------|-----------------------|
| 25118613092 $x^0 y^{96}$ | 13892230 $x^1 y^{96}$ |
| 15462951222 $x^0 y^{97}$ | 5436090 $x^1 y^{97}$  |
| 9361300512 $x^0 y^{98}$  | 1976760 $x^1 y^{98}$  |
| 5566980072 $x^0 y^{99}$  | 658920 $x^1 y^{99}$   |
| 3247679592 $x^0 y^{100}$ | 197676 $x^1 y^{100}$  |
| 1855901628 $x^0 y^{101}$ | 52020 $x^1 y^{101}$   |
| 1037144448 $x^0 y^{102}$ | 11560 $x^1 y^{102}$   |
| 565720408 $x^0 y^{103}$  | 2040 $x^1 y^{103}$    |
| 300539923 $x^0 y^{104}$  | 255 $x^1 y^{104}$     |
| 155117503 $x^0 y^{105}$  | 17 $x^1 y^{105}$      |
| 77558760 $x^0 y^{106}$   |                       |
| 37442160 $x^0 y^{107}$   |                       |
| 17383860 $x^0 y^{108}$   |                       |
| 7726160 $x^0 y^{109}$    |                       |
| 3268760 $x^0 y^{110}$    |                       |
| 1307504 $x^0 y^{111}$    |                       |
| 490314 $x^0 y^{112}$     |                       |
| 170544 $x^0 y^{113}$     |                       |
| 54264 $x^0 y^{114}$      |                       |
| 15504 $x^0 y^{115}$      |                       |
| 3876 $x^0 y^{116}$       |                       |
| 816 $x^0 y^{117}$        |                       |

136 x<sup>0</sup> y<sup>118</sup>

16 x<sup>0</sup> y<sup>119</sup>

1 x<sup>0</sup> y<sup>120</sup>

Number of spanning trees: st2=28 st = 62423051509815793 or 2862423051509815793

TEST: tutteMat[ONE][ZERO]==tutteMat[ZERO][ONE] passed

TEST: tutteMat[TWO][ZERO]-tutteMat[ONE][ONE]+tutteMat[ZERO][TWO]==tutteMat[ONE][ZERO] passed

TEST: tutteMat[THREE][ZERO]-tutteMat[TWO][ONE]+tutteMat[ONE][TWO]-tutteMat[ZERO][THREE]==tutteMat[ONE][ZERO] passed

| threshold | graphs | matches | ratio |
|-----------|--------|---------|-------|
| 17        | 1      | 0       | 0.00  |
| 16        | 16     | 0       | 0.00  |
| 15        | 29     | 331     | 11.41 |
| 14        | 45     | 767     | 17.04 |
| 13        | 59     | 1361    | 23.07 |
| 12        | 71     | 1973    | 27.79 |
| 11        | 81     | 2540    | 31.36 |
| 10        | 89     | 3011    | 33.83 |
| 9         | 95     | 3347    | 35.23 |
| 8         | 99     | 3521    | 35.57 |
| total     | 585    | 16851   | 28.81 |

44.92u 0.24s 1:57.68 38.3%