



# LE CONTINUUM DES GAMMES

Ircam, 27 septembre 2017

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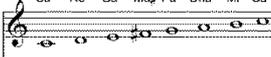
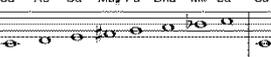
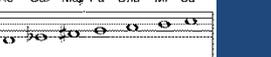
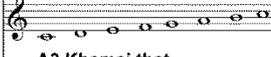
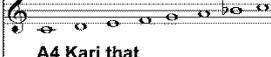
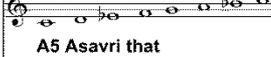
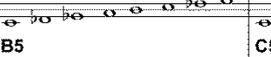
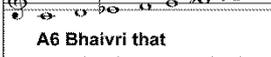
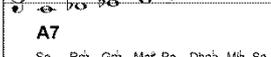
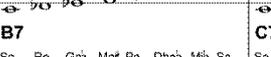
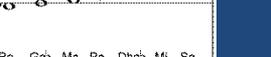
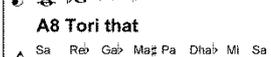
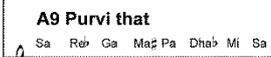
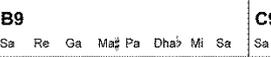
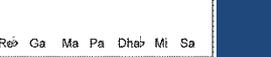
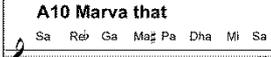
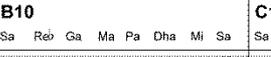
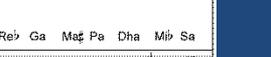
<http://brahms.ircam.fr/julio-estrada>



Universidad Nacional  
Autónoma de México

# 30 THATS, MUSIQUE DU NORD DE L'INDE

## NAZIR JAIRAZBHOY (1927-2009) : permutohèdres

<b>A1 Kaluan that</b> Sa Re Ga Maᄥ Pa Dha Mi Sa 	<b>B1</b> Sa Re Ga Maᄥ Pa Dha Miᄥ Sa 	<b>C1</b> Sa Re Gaᄥ Maᄥ Pa Dha Mi Sa 
<b>A2 Bilaval that</b> Sa Re Ga Ma Pa Dha Mi Sa 	<b>B2</b> Sa Re Gaᄥ Ma Pa Dha Mi Sa 	<b>C2</b> Sa Re Ga Ma Pa Dhaᄥ Mi Sa 
<b>A3 Khamaj that</b> Sa Re Ga Ma Pa Dha Miᄥ Sa 	<b>B3</b> Sa Re Ga Ma Pa Dhaᄥ Miᄥ Sa 	<b>C3</b> Sa Reᄥ Ga Ma Pa Dha Miᄥ Sa 
<b>A4 Kari that</b> Sa Re Gaᄥ Ma Pa Dha Miᄥ Sa 	<b>B4</b> Sa Reᄥ Gaᄥ Ma Pa Dha Miᄥ Sa 	<b>C4</b> Sa Re Gaᄥ Maᄥ Pa Dha Miᄥ Sa 
<b>A5 Asavri that</b> Sa Re Gaᄥ Ma Pa Dhaᄥ Miᄥ Sa 	<b>B5</b> Sa Re Gaᄥ Maᄥ Pa Dhaᄥ Miᄥ Sa 	<b>C5</b> Sa Re Gaᄥ Ma Pa Dhaᄥ Mi Sa 
<b>A6 Bhaivri that</b> Sa Reᄥ Gaᄥ Ma Pa Dhaᄥ Miᄥ Sa 	<b>B6</b> Sa Reᄥ Gaᄥ Ma Pa Dhaᄥ Mi Sa 	<b>C6</b> Sa Reᄥ Ga Ma Pa Dha Miᄥ Sa 
<b>A7</b> Sa Reᄥ Gaᄥ Maᄥ Pa Dhaᄥ Miᄥ Sa 	<b>B7</b> Sa Re Gaᄥ Maᄥ Pa Dhaᄥ Miᄥ Sa 	<b>C7</b> Sa Re Gaᄥ Ma Pa Dhaᄥ Mi Sa 
<b>A8 Tori that</b> Sa Reᄥ Gaᄥ Maᄥ Pa Dhaᄥ Mi Sa 	<b>B8</b> Sa Reᄥ Gaᄥ Maᄥ Pa Dha Mi Sa 	<b>C8</b> Sa Re Gaᄥ Maᄥ Pa Dhaᄥ Mi Sa 
<b>A9 Purvi that</b> Sa Reᄥ Ga Maᄥ Pa Dhaᄥ Mi Sa 	<b>B9</b> Sa Re Ga Maᄥ Pa Dhaᄥ Mi Sa 	<b>C9</b> Sa Reᄥ Ga Ma Pa Dhaᄥ Mi Sa 
<b>A10 Marva that</b> Sa Reᄥ Ga Maᄥ Pa Dha Mi Sa 	<b>B10</b> Sa Reᄥ Ga Ma Pa Dha Mi Sa 	<b>C10</b> Sa Reᄥ Ga Maᄥ Pa Dha Miᄥ Sa 

# TYPES DE GAMMES (rythme et son), exemples : 1/8 ton, diatonique, non octaviante, hauteurs relatives

1/8 1/8 1/8 1/8 1/8 1/8 1/8 1/8

A musical staff in treble clef with a 4/4 time signature. It contains eight eighth notes. The notes are: C4, C#4, D4, D#4, E4, F4, F#4, and G4. Each note is marked with a 1/8 time signature above it.

1/6 1/6 1/12 1/6 1/6 1/6 1/6 1/12

A musical staff in treble clef. It contains eight notes: C4, C4, D4, D4, E4, E4, F4, and F4. The notes are grouped into pairs. Above the first pair (C4, C4) is a bracket labeled 1/6. Above the second pair (D4, D4) is a bracket labeled 1/6. Above the third pair (E4, D4) is a bracket labeled 1/12. Above the fourth pair (E4, E4) is a bracket labeled 1/6. Above the fifth pair (F4, E4) is a bracket labeled 1/6. Above the sixth pair (F4, F4) is a bracket labeled 1/6. Above the seventh pair (F4, F4) is a bracket labeled 1/12. A bracket labeled 12<sup>th</sup> spans from the first C4 to the last F4.

4

3 5 9 7/18

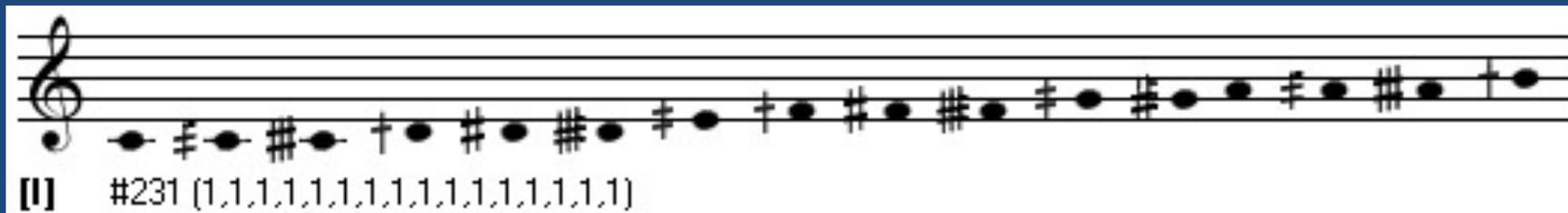
A musical staff in treble clef with a 4/4 time signature. It contains eight notes: C4, C4, D4, D4, E4, E4, F4, and F4. The notes are grouped into pairs. Above the first pair (C4, C4) is a bracket labeled 3. Above the second pair (D4, D4) is a bracket labeled 5. Above the third pair (E4, D4) is a bracket labeled 9. Above the fourth pair (E4, E4) is a bracket labeled 7/18. A note with a flat (F4) is shown with a slash and a dot. Below the staff, there is a note with a slash and a dot, and the text ( / = 1/9).

A musical staff in treble clef. It contains eight notes: C4, C4, D4, D4, E4, E4, F4, and F4. The notes are grouped into pairs. Above the first pair (C4, C4) is a plus sign (+). Above the second pair (D4, D4) is a plus sign (+). Above the third pair (E4, D4) is a plus sign (+). Above the fourth pair (E4, E4) is a minus sign (-). Above the fifth pair (F4, E4) is a minus sign (-). Above the sixth pair (F4, F4) is a minus sign (-).

# GAMMES (D) ENTRE 3 ET 24 TERMES

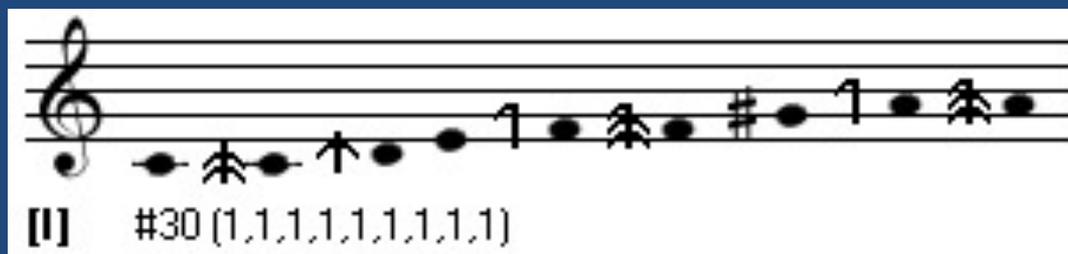
## NOTATION EN BASE 2, 3, 5

exemples : D16, D9, D10



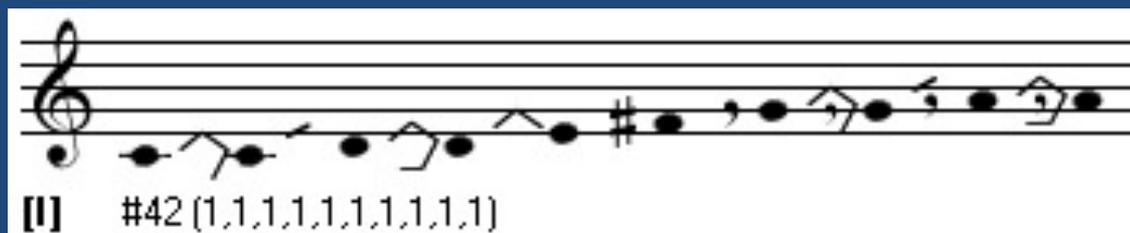
[[ #231 (1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1)

A musical staff in treble clef showing a 16-note scale starting on D4. The notes are: D4, E4, F#4, G4, A4, B4, C#5, D5, E5, F#5, G5, A5, B5, C#6, D6. The notes are marked with various accidentals: natural, sharp, and double sharp.



[[ #30 (1,1,1,1,1,1,1,1,1)

A musical staff in treble clef showing a 30-note scale starting on D4. The notes are: D4, E4, F#4, G4, A4, B4, C#5, D5, E5, F#5, G5, A5, B5, C#6, D6, E6, F#6, G6, A6, B6, C#7, D7, E7, F#7, G7, A7, B7, C#8, D8. The notes are marked with various accidentals: natural, sharp, and double sharp.

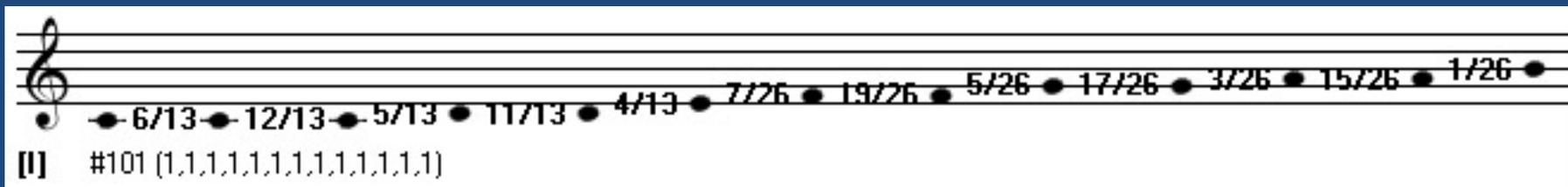


[[ #42 (1,1,1,1,1,1,1,1,1,1)

A musical staff in treble clef showing a 42-note scale starting on D4. The notes are: D4, E4, F#4, G4, A4, B4, C#5, D5, E5, F#5, G5, A5, B5, C#6, D6, E6, F#6, G6, A6, B6, C#7, D7, E7, F#7, G7, A7, B7, C#8, D8, E8, F#8, G8, A8, B8, C#9, D9. The notes are marked with various accidentals: natural, sharp, and double sharp.

# NOTATION EN FRACTIONS DE TON

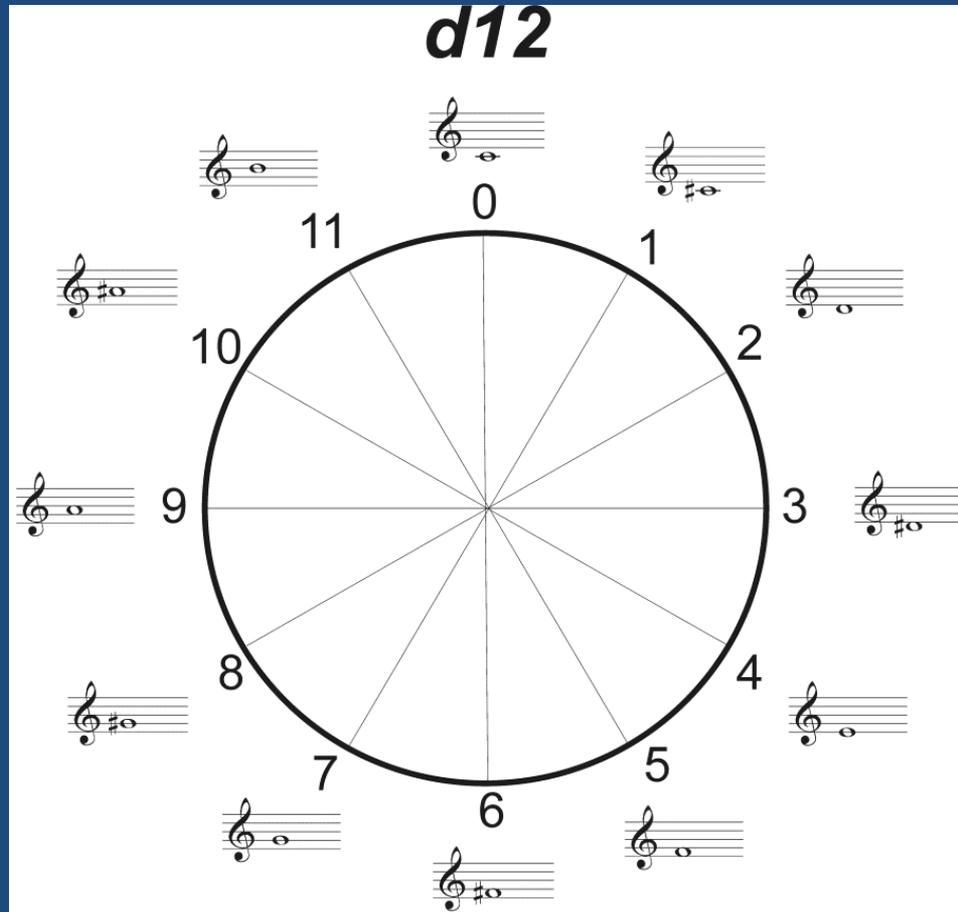
## exemple : D13



A musical staff with a treble clef and a single note on the first line. Below the staff, a sequence of fractions is written, each preceded by a dot and connected to the next by a horizontal line. The fractions are: 6/13, 12/13, 5/13, 11/13, 4/13, 7/26, 19/26, 5/26, 17/26, 3/26, 15/26, and 1/26. Below the staff, the text "[1] #101 (1,1,1,1,1,1,1,1,1,1,1)" is written.

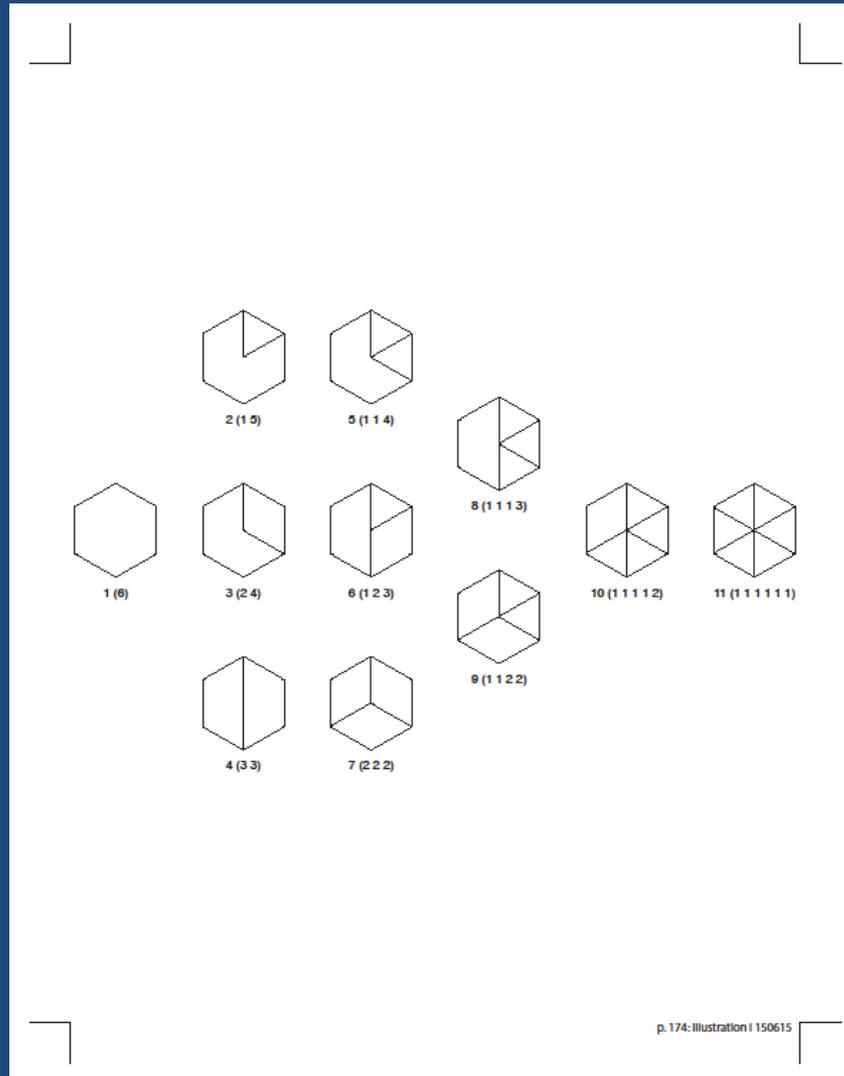
[1] #101 (1,1,1,1,1,1,1,1,1,1,1)

# REPRÉSENTATION CYCLIQUE GAMME DE DOUZE SONS, D12



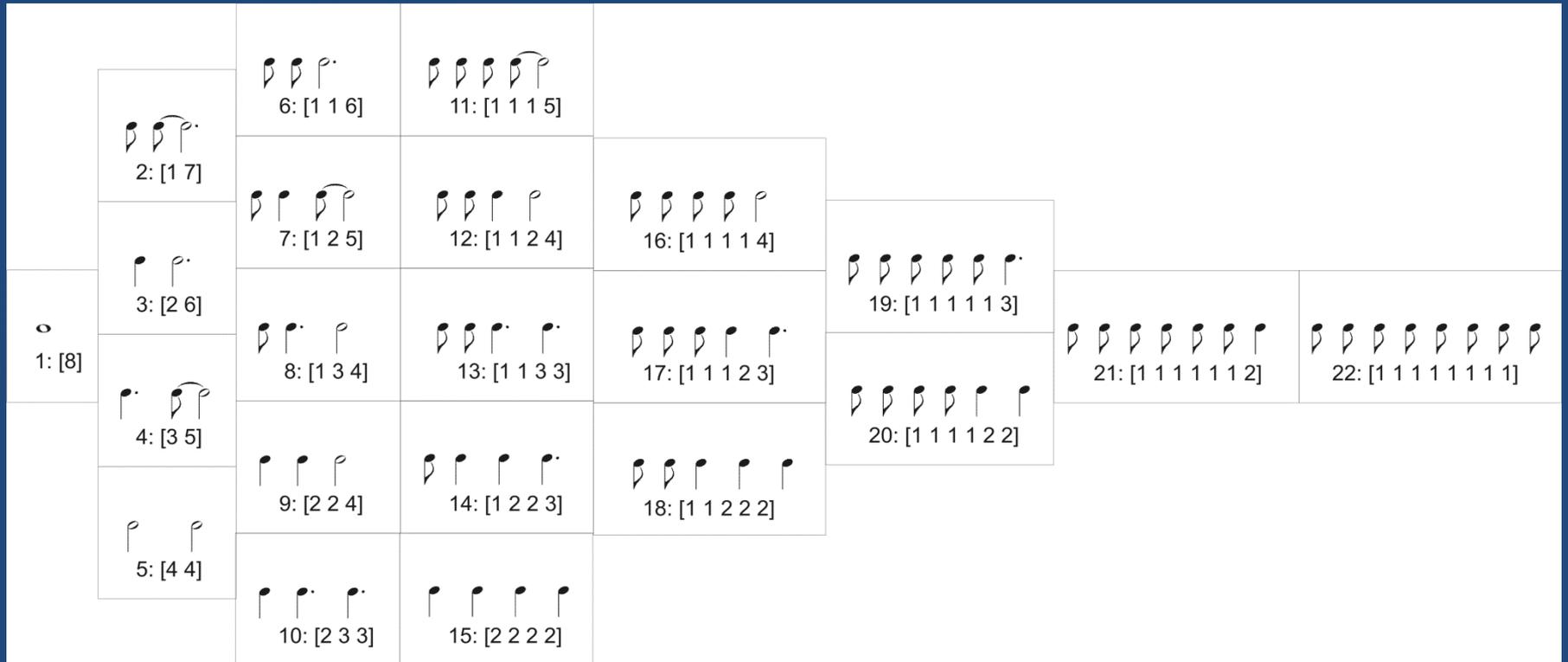
# PARTITIONS DE L'INTERVALLE DE DUPLICATION INTERVALLES DE HAUTEUR (OU AUTRE INTERVALLE) , OU DE DURÉE

exemple : gamme de six termes D6



# POTENTIEL COMBINATOIRE, GAMME DE DURÉES

## exemple : D8, 22 IDENTITÉS D'INTERVALLES





# D12 : POTENTIEL COMBINATOIRE

## 77 IDENTITÉS D'INTERVALLES

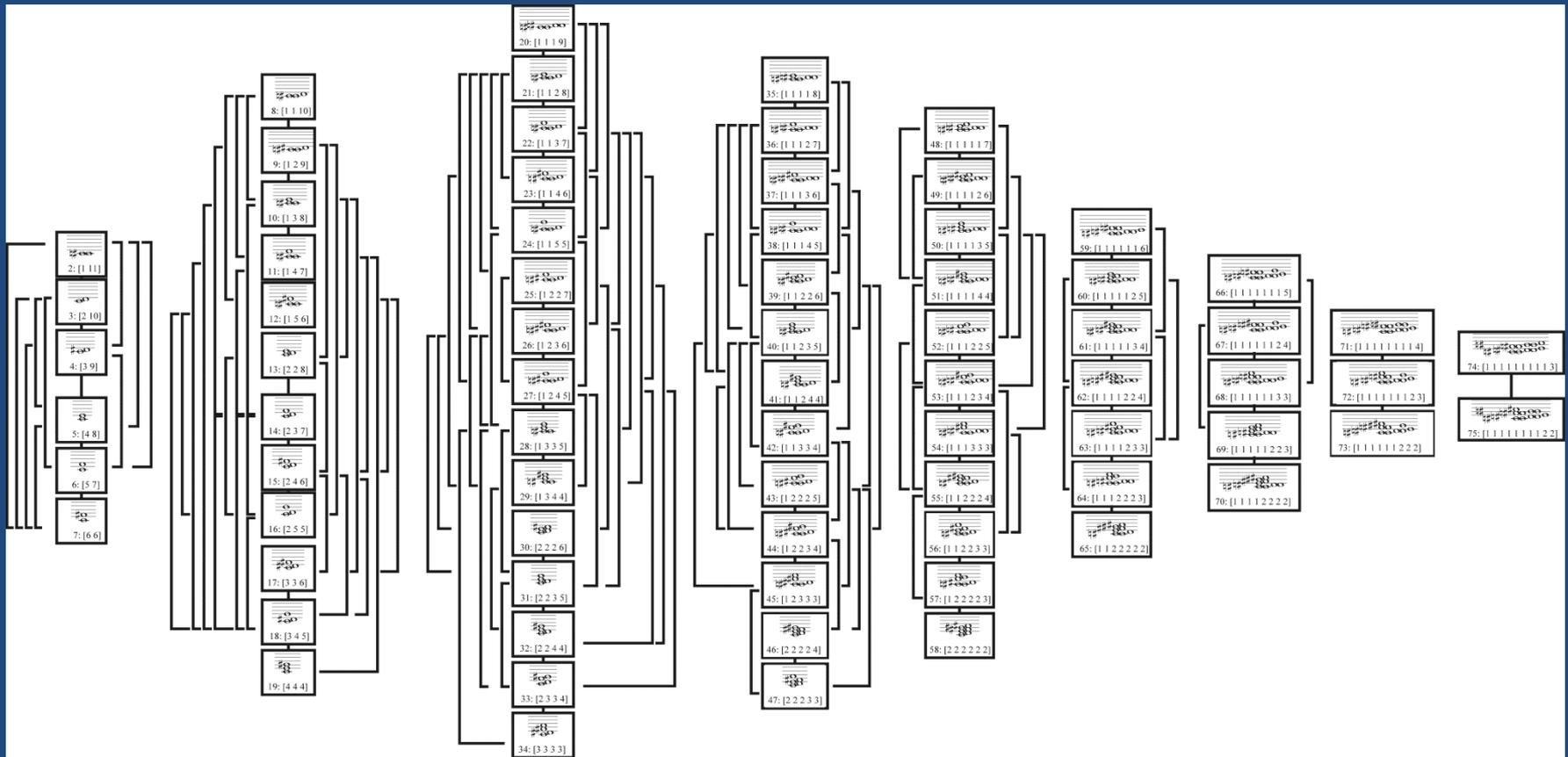
The image displays 77 interval identities, each represented by a musical staff with notes and rests. Each identity is associated with a set of mathematical expressions indicating the number of intervals of various sizes (e.g.,  $2i$ ,  $3i$ ,  $4i$ ) and the total number of intervals ( $x_i$ ).

Key identities include:

- 1: [12]  $1i=1, x1=1$
- 2: [11]  $2i=2, x2=12$
- 3: [210]  $2i=2, x3=6$
- 4: [39]  $2i=2, x4=12$
- 5: [48]  $2i=2, x5=12$
- 6: [57]  $2i=2, x6=12$
- 7: [66]  $2i=2, x7=12$
- 8: [1110]  $3i=3, x4=12$
- 9: [129]  $3i=6, x12=72$
- 10: [138]  $3i=6, x12=72$
- 11: [147]  $3i=6, x12=72$
- 12: [156]  $3i=6, x12=72$
- 13: [228]  $2i=2, x3=6$
- 14: [237]  $2i=2, x3=6$
- 15: [246]  $2i=2, x3=6$
- 16: [255]  $2i=2, x3=6$
- 17: [336]  $3i=3, x4=12$
- 18: [345]  $3i=6, x12=72$
- 19: [444]  $3i=3, x12=72$
- 20: [1119]  $4i=4, x3=12$
- 21: [1128]  $4i=12, x12=144$
- 22: [1137]  $4i=12, x2=24$
- 23: [1146]  $4i=12, x12=144$
- 24: [1155]  $4i=6, x3=18$
- 25: [1227]  $4i=12, x12=144$
- 26: [1236]  $4i=24, x12=288$
- 27: [1245]  $4i=24, x12=288$
- 28: [1335]  $4i=12, x3=36$
- 29: [1344]  $4i=12, x4=48$
- 30: [2226]  $4i=4, x3=12$
- 31: [2235]  $4i=12, x6=72$
- 32: [2244]  $4i=6, x6=36$
- 33: [2334]  $4i=12, x12=144$
- 34: [3333]  $4i=1, x1=1$
- 35: [1118]  $5i=5, x3=15$
- 36: [1127]  $5i=20, x2=40$
- 37: [1136]  $5i=20, x12=240$
- 38: [1145]  $5i=20, x3=60$
- 39: [1226]  $5i=30, x12=360$
- 40: [1235]  $5i=60, x3=180$
- 41: [1244]  $5i=30, x4=120$
- 42: [1334]  $5i=30, x4=120$
- 43: [1225]  $5i=20, x3=60$
- 44: [12234]  $5i=20, x3=60$
- 45: [12333]  $5i=20, x6=120$
- 46: [2224]  $5i=5, x6=30$
- 47: [22233]  $5i=10, x12=120$
- 48: [11117]  $6i=6, x12=12$
- 49: [11126]  $6i=30, x12=360$
- 50: [11135]  $6i=45, x3=90$
- 51: [11144]  $6i=45, x4=180$
- 52: [111225]  $6i=60, x3=180$
- 53: [111234]  $6i=120, x4=480$
- 54: [111333]  $6i=60, x6=120$
- 55: [112224]  $6i=60, x4=240$
- 56: [112233]  $6i=80, x6=540$
- 57: [122223]  $6i=30, x6=180$
- 58: [22222]  $6i=1, x1=1$
- 59: [111116]  $7i=7, x12=84$
- 60: [111125]  $7i=42, x3=126$
- 61: [111134]  $7i=42, x4=168$
- 62: [1111224]  $7i=105, x4=420$
- 63: [1111233]  $7i=105, x6=630$
- 64: [1112223]  $7i=140, x6=840$
- 65: [1122222]  $7i=21, x12=252$
- 66: [1111115]  $8i=8, x3=24$
- 67: [1111124]  $8i=56, x4=224$
- 68: [1111133]  $8i=24, x6=168$
- 69: [11111223]  $8i=188, x6=1008$
- 70: [11112222]  $8i=70, x12=840$
- 71: [11111114]  $9i=9, x4=36$
- 72: [11111123]  $9i=72, x6=437$
- 73: [111111222]  $9i=84, x12=1008$
- 74: [111111113]  $10i=10, x6=60$
- 75: [1111111122]  $10i=45, x12=540$
- 76: [11111111112]  $11i=11, x12=132$
- 77: [111111111111]  $12i=12, x6=60$

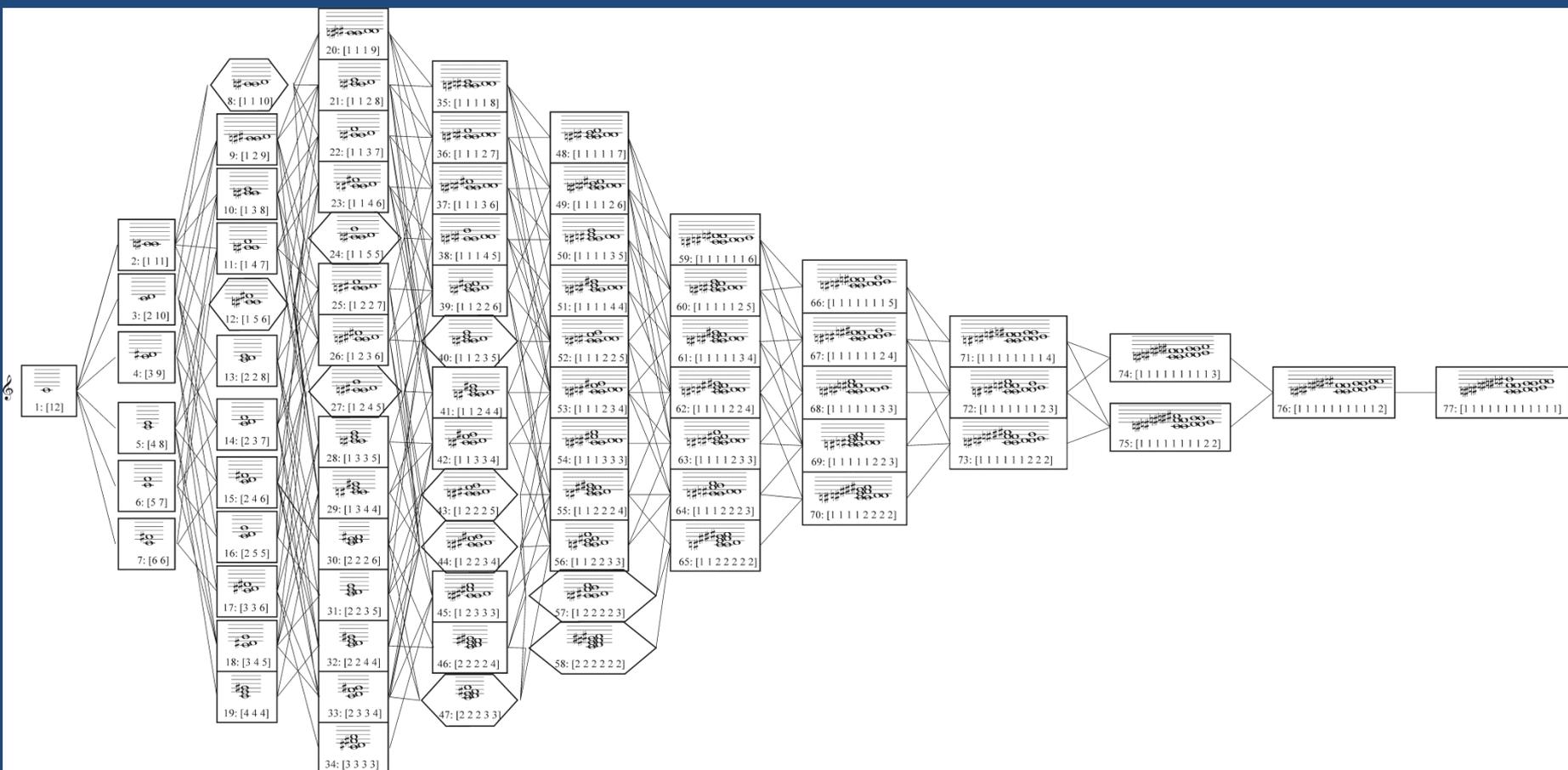
# RÉSEAU VERTICALE ENTRE IDENTITÉS

## D12 : 75 identités à distance $d1$



# RÉSEAU HORIZONTALE ENTRE IDENTITÉS

## D12 : 77 identités à distance $d1$



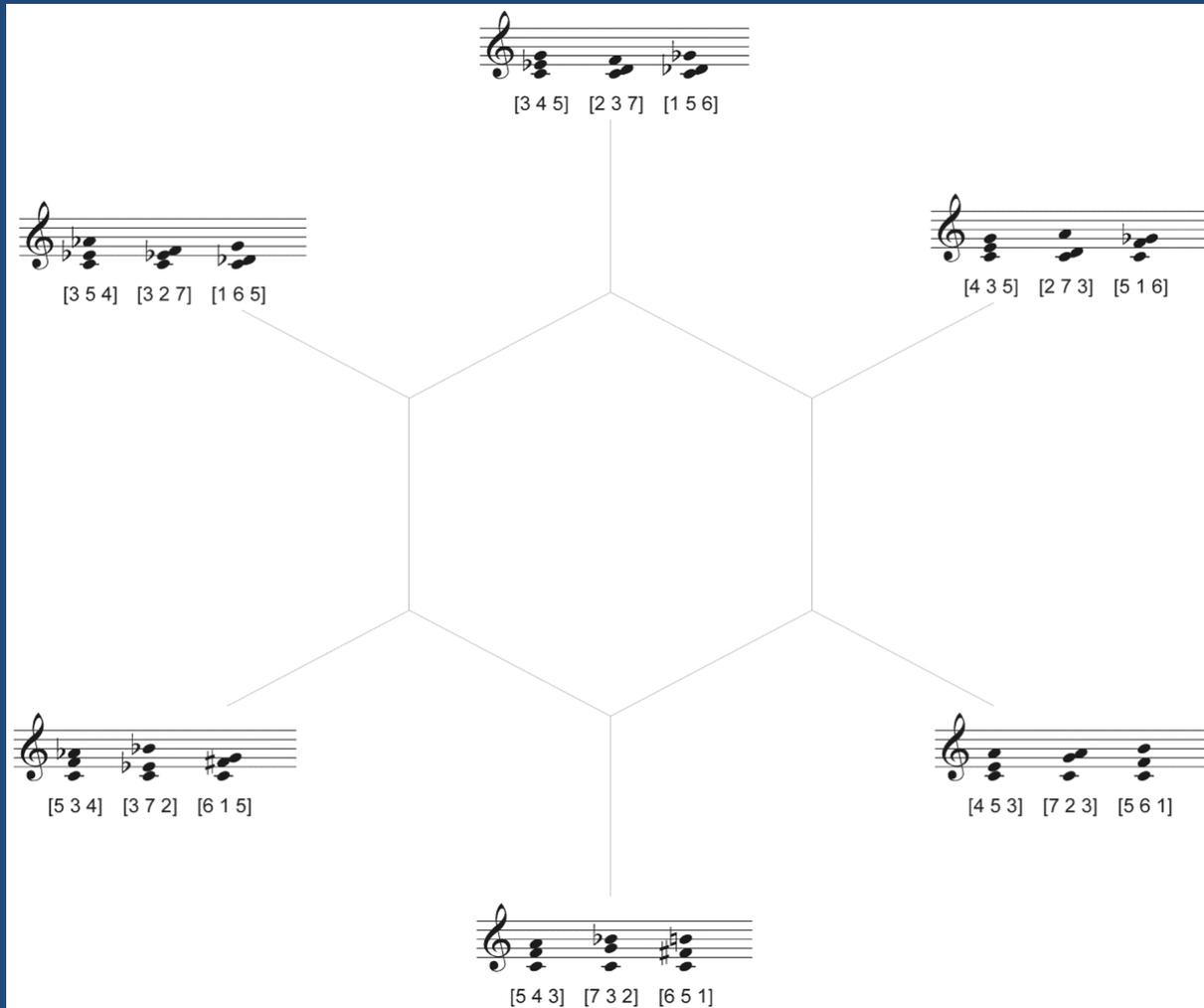
## TRANSITIONS CONTINUES À DISTANCE MINIMALE $d1$

- *permutation* : (1,4)  $d1$  (4,1)
- *substitution* : (1,4)  $d1$  (2,3)
- *partition* : (5)  $d1$  (1,4)
- *fusion* : (1,4)  $d1$  (5)
- *addition* d'unité minimale : (1,4)  $d1$  (2,4)
- *soustraction* d'unité minimale : (2,4)  $d1$  (1,4)
- *division* d'intervalles : (4,4,4)  $d1$  (2,2,2)
- *multiplication* d'intervalles : (1,2,3)  $d1$  (2,4,6)

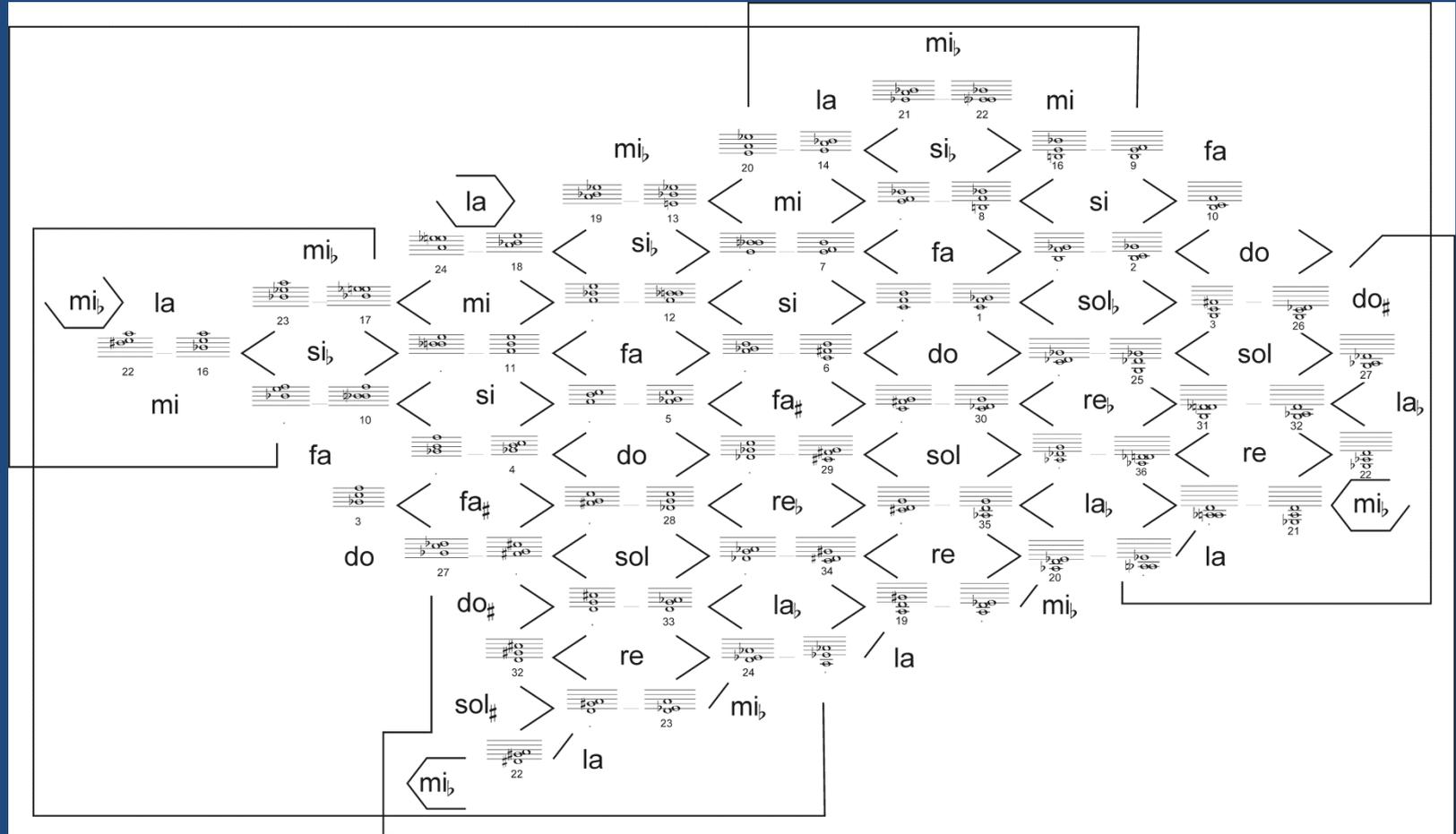
# PERMUTAHÈDRE HEXAGONALE :

## IDENTITÉS DE NIVEAU 3 : a b c

3 intervalles différents entre eux , ex : 3 4 5, 2 3 7, 1 5 6



# PERMUTOHÈDRE a b c AVEC SES 12 TRANSPOSITIONS, 72 nœuds (ex : 1 5 6)



# PERMUTOHÈDRE a b c d FRAGMENTS

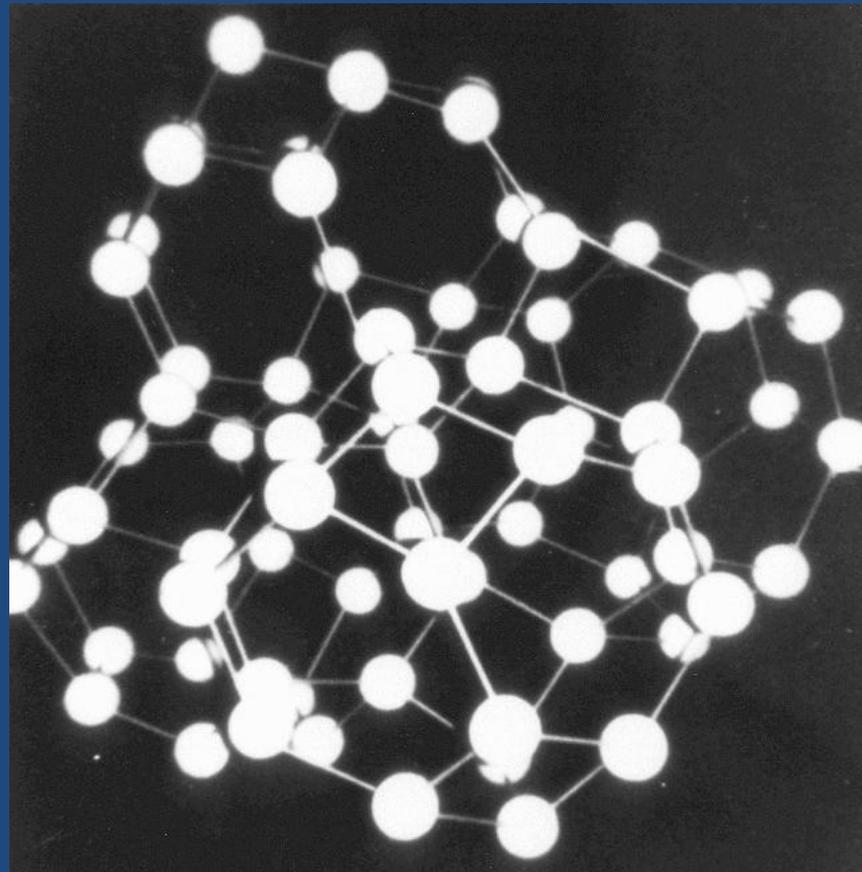
## exemple : 1 2 4 5

The image displays four musical diagrams, each representing a fragment of a permutohedron. Each diagram consists of a central node and five adjacent nodes, all connected by lines. Each node is represented by a musical staff with a treble clef and a key signature of two flats (B-flat and E-flat). The fragments are labeled as follows:

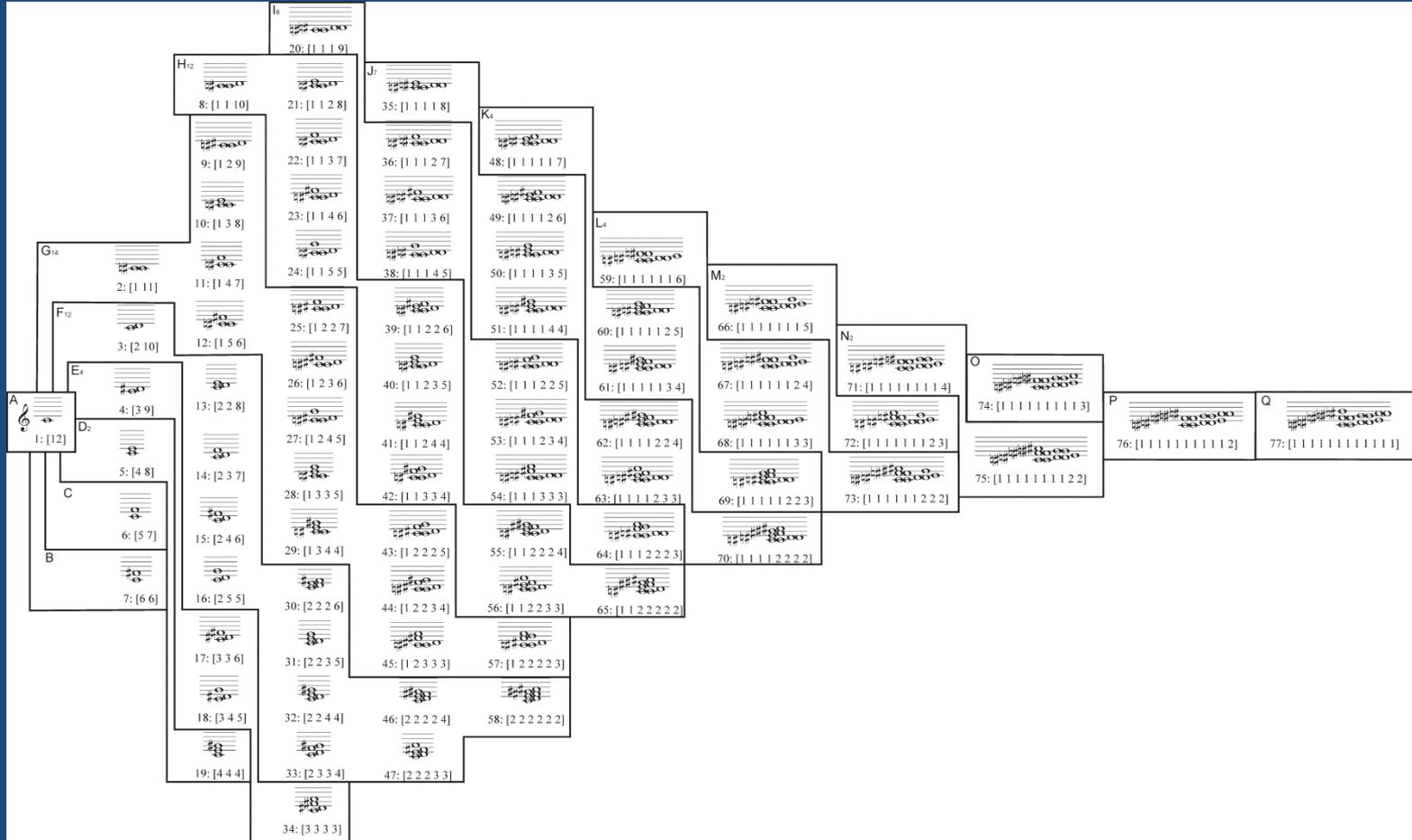
- li<sub>0</sub>**: The central node is labeled  $li_0$ . The five adjacent nodes are labeled with permutations: [1 2 4 5] (top), [1 5 4 2] (top-left), [1 4 2 5] (top-right), [1 4 5 2] (bottom-left), and [4 1 5 2] (bottom).
- a<sub>1</sub>**: The central node is labeled  $a_1$ . The five adjacent nodes are labeled with permutations: [2 5 4 1] (top), [1 2 4 5] (top-left), [2 4 5 1] (top-right), [5 4 2 1] (bottom-left), and [4 5 2 1] (bottom).
- Tr<sub>3</sub>**: The central node is labeled  $Tr_3$ . The five adjacent nodes are labeled with permutations: [1 2 4 5] (top), [4 1 2 5] (top-left), [1 4 2 5] (top-right), [4 1 5 2] (bottom-left), and [1 4 5 2] (bottom).
- a'<sub>2</sub>**: The central node is labeled  $a'_2$ . The five adjacent nodes are labeled with permutations: [2 5 4 1] (top), [5 2 4 1] (top-left), [2 4 5 1] (top-right), [5 4 2 1] (bottom-left), and [4 5 2 1] (bottom).

Each musical staff contains a single note, representing the fragment's position in the permutohedron. The diagrams illustrate the relationships between these fragments and their corresponding permutations.

**PERMUTOHÈDRE : IDENTITÉ a b c d**  
**(fragment), exemple : 1 2 3 6 ou 1 2 4 5**  
**Construit par E. González, Mexico 1980**



# DIVISION DU POTENTIAL COMBINATOIRE EN 17 ZONES



# CARLO GESUALDO : MORO LASSO, RESEAU DE L'IDENTITE 3 4 5

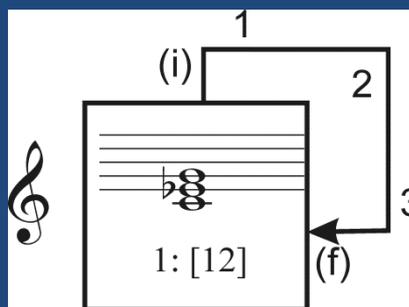
D. (3) (5) (2)

C.I. (4 3 5) (5 3 4) (5 4 3) (4 5 3) (4 3 5) (5 3 4) (3 5 4) (3 4 5) (4 3 5) (3 4 5) (3 5 4)

N. 3

V. 1 2 3 4

The score consists of three staves: C.I. (Cello I), N. (Violoncello), and V. (Violoncello). The C.I. staff has a treble clef and a key signature of two sharps (F# and C#). The N. and V. staves have a bass clef and a key signature of two sharps. The V. staff is divided into four measures, each with a measure number (1, 2, 3, 4) above it. The C.I. staff has a dotted line connecting the first and second measures, and another dotted line connecting the third and fourth measures. The N. staff has a '3' above the first measure. The V. staff has a '1' above the first measure, and a '(f)' below the fourth measure.



# IDENTITÉS CONSONANTES DU POTENTIEL D12 : 6/77

1: [12]

2: [1 11]

3: [2 10]

4: [3 9]

5: [4 8]

6: [5 7]

7: [6 6]

8: [1 1 10]

9: [1 2 9]

10: [1 3 8]

11: [1 4 7]

12: [1 5 6]

13: [2 2 8]

14: [2 3 7]

15: [2 4 6]

16: [2 5 5]

17: [3 3 6]

18: [3 4 5]

19: [4 4 4]



# MORO LASSO : PROJECTION DE L'EXPLORATION ET IDENTITÉS INEXPLORÉES

1: [12]

2: [1 11]

3: [2 10]

4: [3 9]

5: [4 8]

6: [5 7]

7: [6 6]

8: [1 1 10]

9: [1 2 9]

10: [1 3 8]

11: [1 4 7]

12: [1 5 6]

13: [2 2 8]

14: [2 3 7]

15: [2 4 6]

16: [2 5 5]

17: [3 3 6]

18: [3 4 5]

19: [4 4 4]

20: [1 1 1 9]

21: [1 1 2 8]

22: [1 1 3 7]

23: [1 1 4 6]

24: [1 1 5 5]

25: [1 2 2 7]

26: [1 2 3 6]

27: [1 2 4 5]

28: [1 3 3 5]

29: [1 3 4 4]

30: [2 2 2 6]

31: [2 2 3 5]

32: [2 2 4 4]

33: [2 3 3 4]

34: [3 3 3 3]

# PROJECTION DE L'EXPLORATION DE L'ESPACE TONALE : ID: 1 1 2 2 2 2 et 1 1 1 2 2 2 3

The diagram shows a grid of 65 musical staves, each labeled with an ID and a sequence of numbers in brackets. The staves are arranged in a roughly rectangular shape with some missing cells. Each staff contains a musical staff with a treble clef, a key signature of one sharp (F#), and a specific chord or sequence of notes. The IDs range from 1 to 65, with some missing (e.g., 19, 20, 34).

ID	Sequence
1	[12]
2	[1 11]
3	[2 10]
4	[3 9]
5	[4 8]
6	[5 7]
7	[6 6]
8	[1 1 10]
9	[1 2 9]
10	[1 3 8]
11	[1 4 7]
12	[1 5 6]
13	[2 2 8]
14	[2 3 7]
15	[2 4 6]
16	[2 5 5]
17	[3 3 6]
18	[3 4 5]
19	[4 4 4]
20	[1 1 1 9]
21	[1 1 2 8]
22	[1 1 3 7]
23	[1 1 4 6]
24	[1 1 5 5]
25	[1 2 2 7]
26	[1 2 3 6]
27	[1 2 4 5]
28	[1 3 3 5]
29	[1 3 4 4]
30	[2 2 2 6]
31	[2 2 3 5]
32	[2 2 4 4]
33	[2 3 3 4]
34	[3 3 3 3]
35	[1 1 1 1 8]
36	[1 1 1 2 7]
37	[1 1 1 3 6]
38	[1 1 1 4 5]
39	[1 1 2 2 6]
40	[1 1 2 3 5]
41	[1 1 2 4 4]
42	[1 1 3 3 4]
43	[1 2 2 2 5]
44	[1 2 2 3 4]
45	[1 2 3 3 3]
46	[2 2 2 2 4]
47	[2 2 2 3 3]
48	[1 1 1 1 1 7]
49	[1 1 1 1 2 6]
50	[1 1 1 1 3 5]
51	[1 1 1 1 4 4]
52	[1 1 1 2 2 5]
53	[1 1 1 2 3 4]
54	[1 1 1 3 3 3]
55	[1 1 2 2 2 4]
56	[1 1 2 2 3 3]
57	[1 2 2 2 2 3]
58	[2 2 2 2 2 2]
59	[1 1 1 1 1 1 6]
60	[1 1 1 1 1 2 5]
61	[1 1 1 1 1 3 4]
62	[1 1 1 1 2 2 4]
63	[1 1 1 1 2 3 3]
64	[1 1 1 2 2 2 3]
65	[1 1 2 2 2 2 2]



# XENAKIS : IKHOOR, TRIO À CORDES

## PROJECTION DE L'EXPLORATION EN 6 NIVEAUX DE DENSITÉ

The image displays a musical score for 'IKHOOR, TRIO À CORDES' by Xenakis. It features 70 numbered musical staves, each with a density level indicated in brackets. The staves are arranged in a grid-like pattern, with some staves grouped together by solid and dashed lines. A treble clef is visible on the left side of the score.

1: [12]

2: [111]

3: [2 10]

4: [3 9]

5: [4 8]

6: [5 7]

7: [6 6]

8: [1 1 10]

9: [1 2 9]

10: [1 3 8]

11: [1 4 7]

12: [1 5 6]

13: [2 2 8]

14: [2 3 7]

15: [2 4 6]

16: [2 5 5]

17: [3 3 6]

18: [3 4 5]

19: [4 4 4]

20: [1 1 1 9]

21: [1 1 2 8]

22: [1 1 3 7]

23: [1 1 4 6]

24: [1 1 5 5]

25: [1 2 2 7]

26: [1 2 3 6]

27: [1 2 4 5]

28: [1 3 3 5]

29: [1 3 4 4]

30: [2 2 2 6]

31: [2 2 3 5]

32: [2 2 4 4]

33: [2 3 3 4]

34: [3 3 3 3]

35: [1 1 1 1 8]

36: [1 1 1 2 7]

37: [1 1 1 3 6]

38: [1 1 1 4 5]

39: [1 1 2 2 6]

40: [1 1 2 3 5]

41: [1 1 2 4 4]

42: [1 1 3 3 4]

43: [1 2 2 2 5]

44: [1 2 2 3 4]

45: [1 2 3 3 3]

46: [2 2 2 2 4]

47: [2 2 2 3 3]

48: [1 1 1 1 1 7]

49: [1 1 1 1 2 6]

50: [1 1 1 1 3 5]

51: [1 1 1 1 4 4]

52: [1 1 1 2 2 5]

53: [1 1 1 2 3 4]

54: [1 1 1 3 3 3]

55: [1 1 2 2 2 4]

56: [1 1 2 2 3 3]

57: [1 2 2 2 2 3]

58: [2 2 2 2 2 2]

59: [1 1 1 1 1 1 6]

60: [1 1 1 1 1 2 5]

61: [1 1 1 1 1 3 4]

62: [1 1 1 1 2 2 4]

63: [1 1 1 1 2 3 3]

64: [1 1 1 2 2 2 3]

65: [1 1 2 2 2 2 2]

66: [1 1 1 1 1 1 1 5]

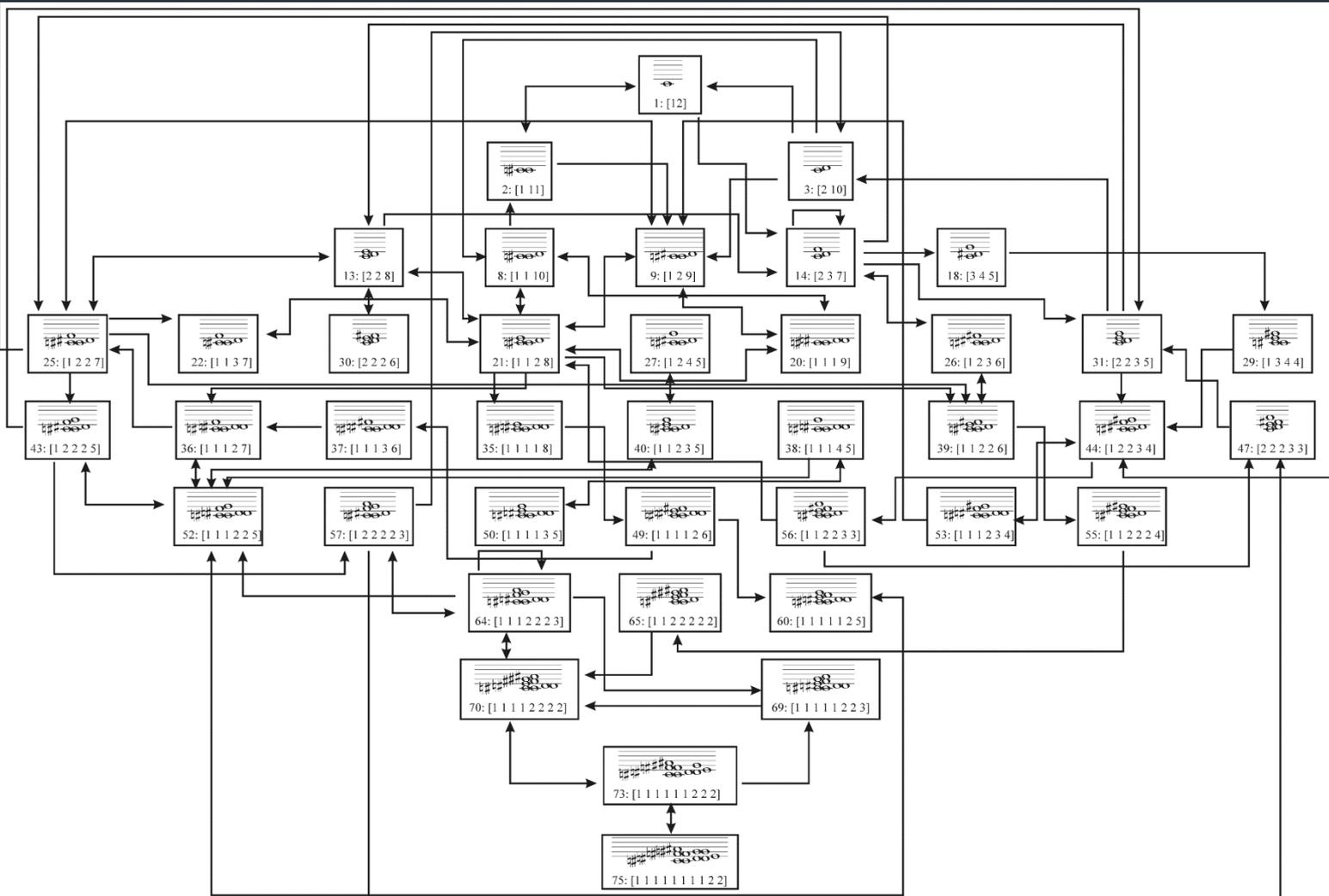
67: [1 1 1 1 1 1 2 4]

68: [1 1 1 1 1 1 3 3]

69: [1 1 1 1 1 2 2 3]

70: [1 1 1 1 2 2 2 2]

# GYÖRGY LIGETI : LUX AETERNA, RESEAU D'IDENTITÉS



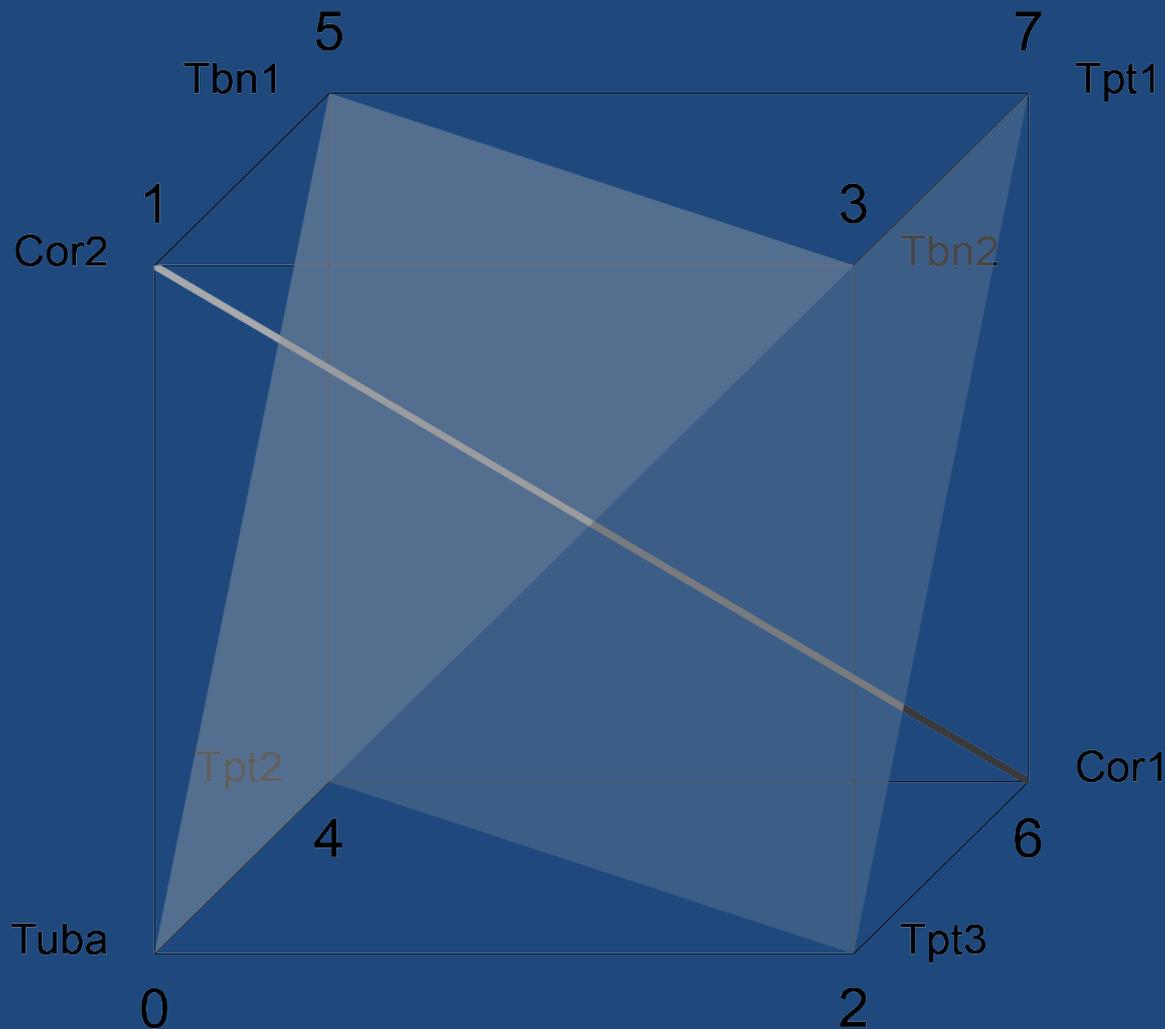
# GYÖRGY LIGETI : LUX AETERNA, 16 VOIX

## PROJECTION ENTRE L'EXPLORATION ET SON POTENTIEL: 10 NIVEAUX

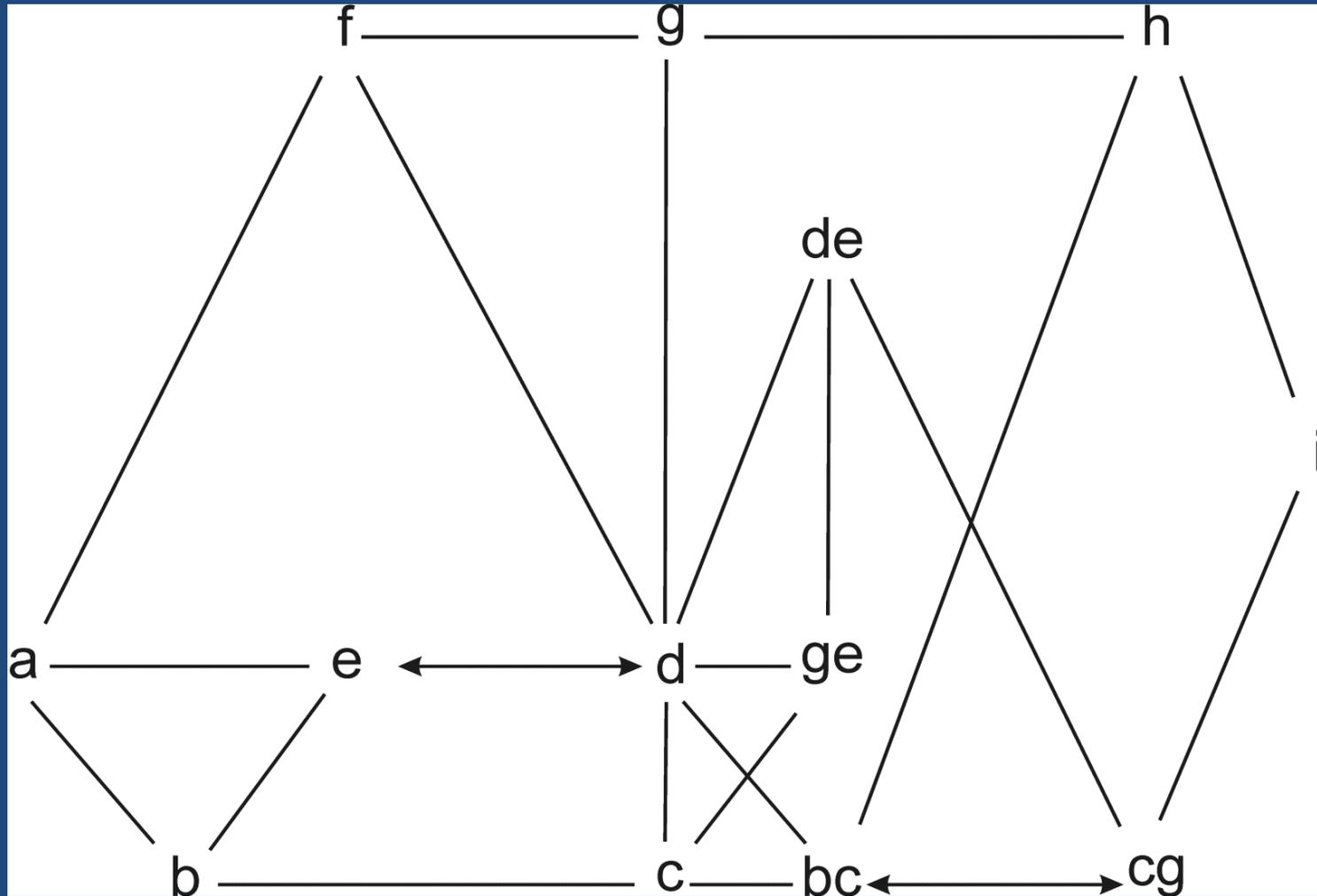
The image displays a complex musical score for 16 voices, organized into 10 levels. The score is presented as a grid of musical staves, each accompanied by a numerical sequence in brackets. The staves are arranged in a roughly rectangular shape, with some missing in the lower right. The numerical sequences are as follows:

- 1: [12]
- 2: [1 11]
- 3: [2 10]
- 4: [3 9]
- 5: [4 8]
- 6: [5 7]
- 7: [6 6]
- 8: [1 1 10]
- 9: [1 2 9]
- 10: [1 3 8]
- 11: [1 4 7]
- 12: [1 5 6]
- 13: [2 2 8]
- 14: [2 3 7]
- 15: [2 4 6]
- 16: [2 5 5]
- 17: [3 3 6]
- 18: [3 4 5]
- 19: [4 4 4]
- 20: [1 1 1 9]
- 21: [1 1 2 8]
- 22: [1 1 3 7]
- 23: [1 1 4 6]
- 24: [1 1 5 5]
- 25: [1 2 2 7]
- 26: [1 2 3 6]
- 27: [1 2 4 5]
- 28: [1 3 3 5]
- 29: [1 3 4 4]
- 30: [2 2 2 6]
- 31: [2 2 3 5]
- 32: [2 2 4 4]
- 33: [2 3 3 4]
- 34: [3 3 3 3]
- 35: [1 1 1 1 8]
- 36: [1 1 1 2 7]
- 37: [1 1 1 3 6]
- 38: [1 1 1 4 5]
- 39: [1 1 2 2 6]
- 40: [1 1 2 3 5]
- 41: [1 1 2 4 4]
- 42: [1 1 3 3 4]
- 43: [1 2 2 2 5]
- 44: [1 2 2 3 4]
- 45: [1 2 3 3 3]
- 46: [2 2 2 2 4]
- 47: [2 2 2 3 3]
- 48: [1 1 1 1 1 7]
- 49: [1 1 1 1 2 6]
- 50: [1 1 1 1 3 5]
- 51: [1 1 1 1 4 4]
- 52: [1 1 1 2 2 5]
- 53: [1 1 1 2 3 4]
- 54: [1 1 1 3 3 3]
- 55: [1 1 2 2 2 4]
- 56: [1 1 2 2 3 3]
- 57: [1 2 2 2 2 3]
- 58: [2 2 2 2 2 2]
- 59: [1 1 1 1 1 1 6]
- 60: [1 1 1 1 1 2 5]
- 61: [1 1 1 1 1 3 4]
- 62: [1 1 1 1 2 2 4]
- 63: [1 1 1 1 2 3 3]
- 64: [1 1 1 2 2 2 3]
- 65: [1 1 2 2 2 2 2]
- 66: [1 1 1 1 1 1 1 5]
- 67: [1 1 1 1 1 1 2 4]
- 68: [1 1 1 1 1 1 3 3]
- 69: [1 1 1 1 1 2 2 3]
- 70: [1 1 1 1 2 2 2 2]
- 71: [1 1 1 1 1 1 1 1 4]
- 72: [1 1 1 1 1 1 1 2 3]
- 73: [1 1 1 1 1 1 1 2 2 2]
- 74: [1 1 1 1 1 1 1 1 1 3]
- 75: [1 1 1 1 1 1 1 1 2 2]

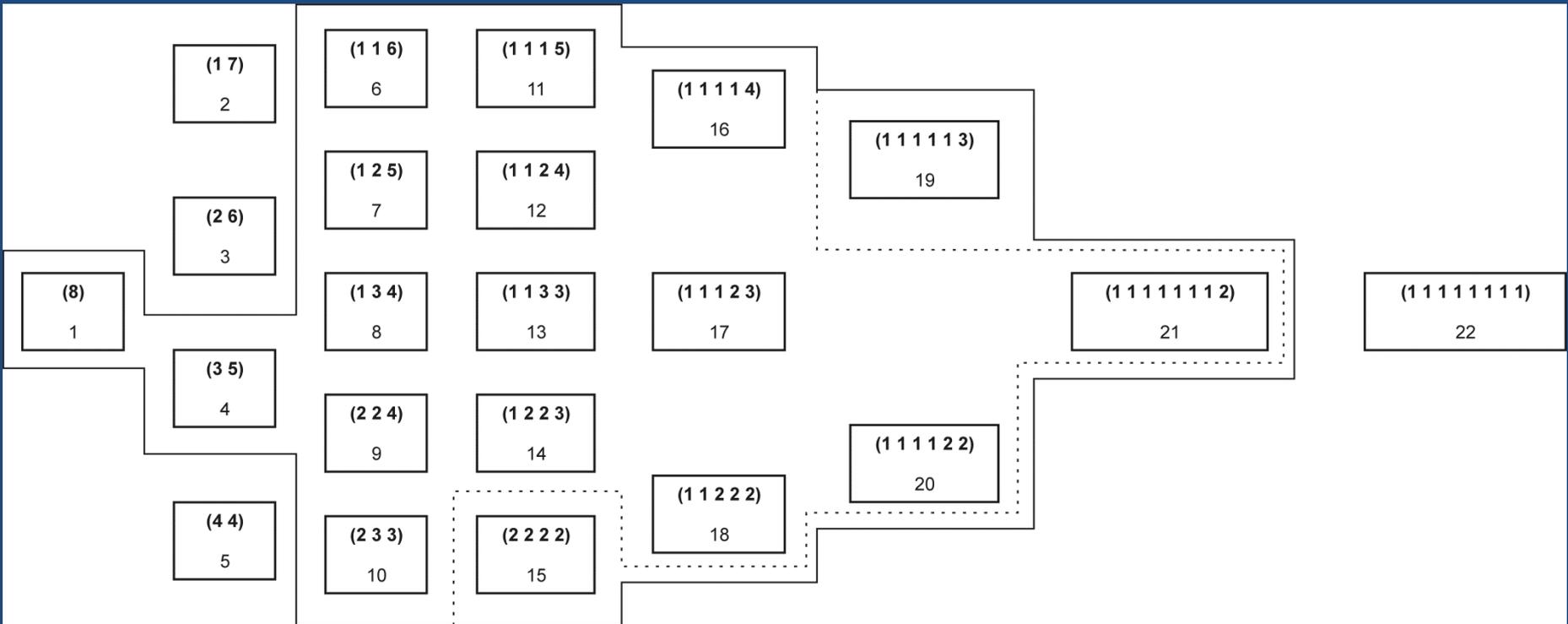
# ESTRADA : CANTO NACIENTE, OCTUOR À CUIVRES SPATIALISATION À 3 DIMENSIONS



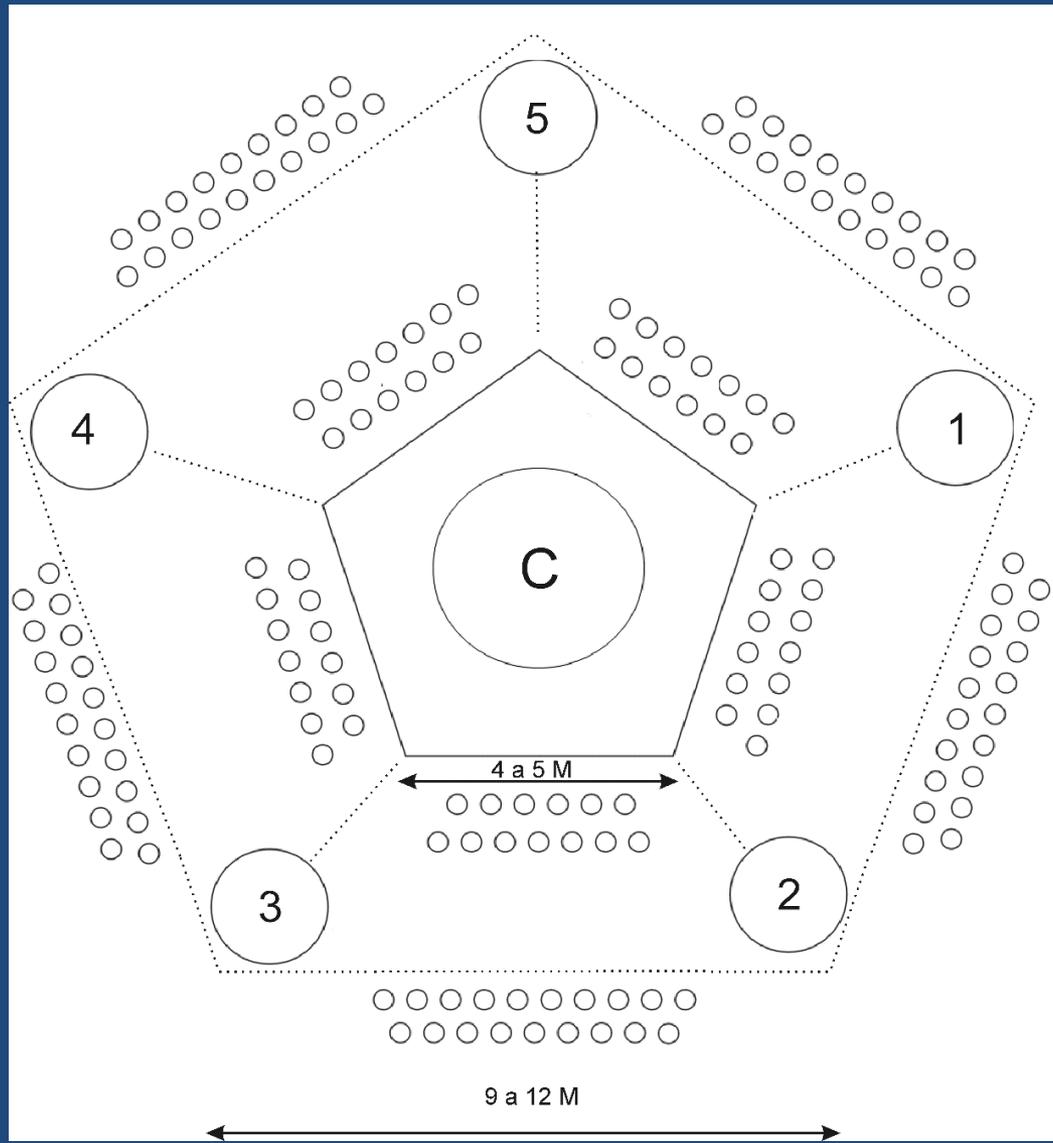
# RELATIONS TEXTURES - SPACES : CANTO NACIENTE



# CANTO NACIENTE : IDENTITÉS DES INTERVALLES D'ESPACE

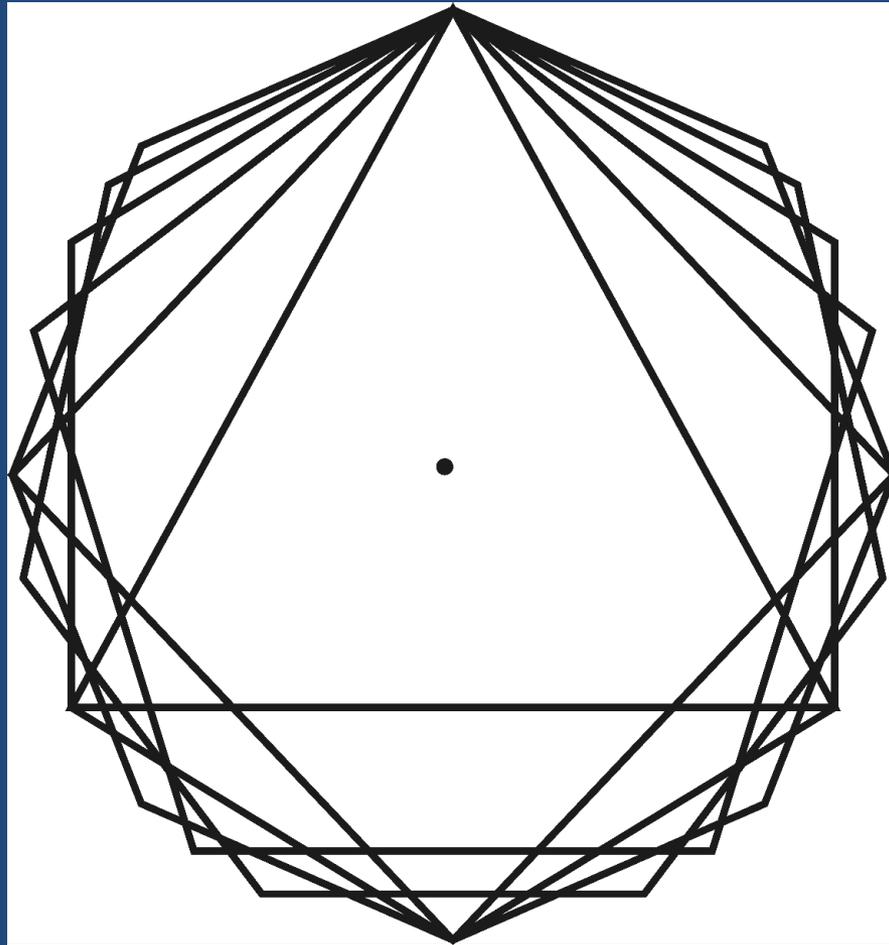


# eolo'oolin, 6 percussions

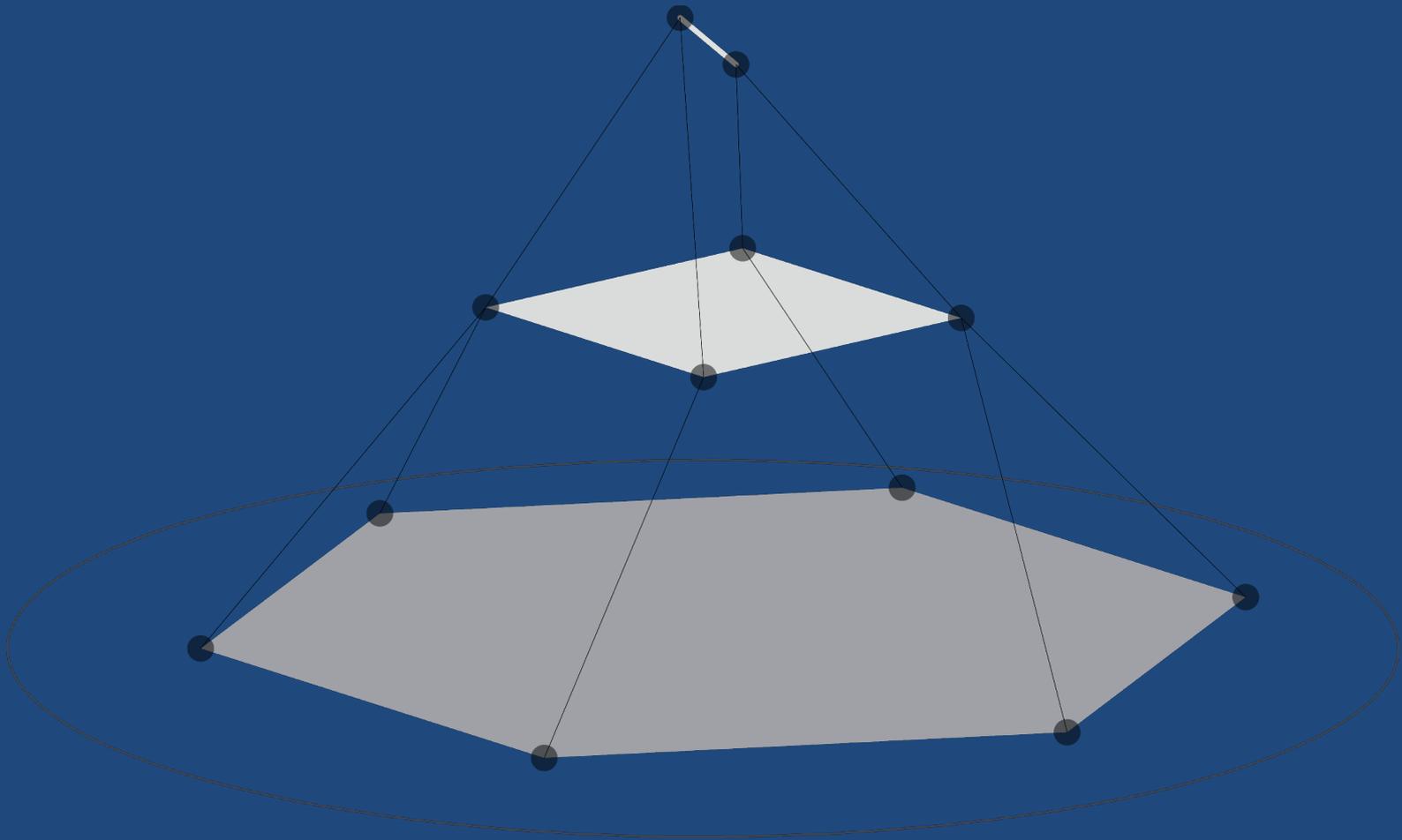




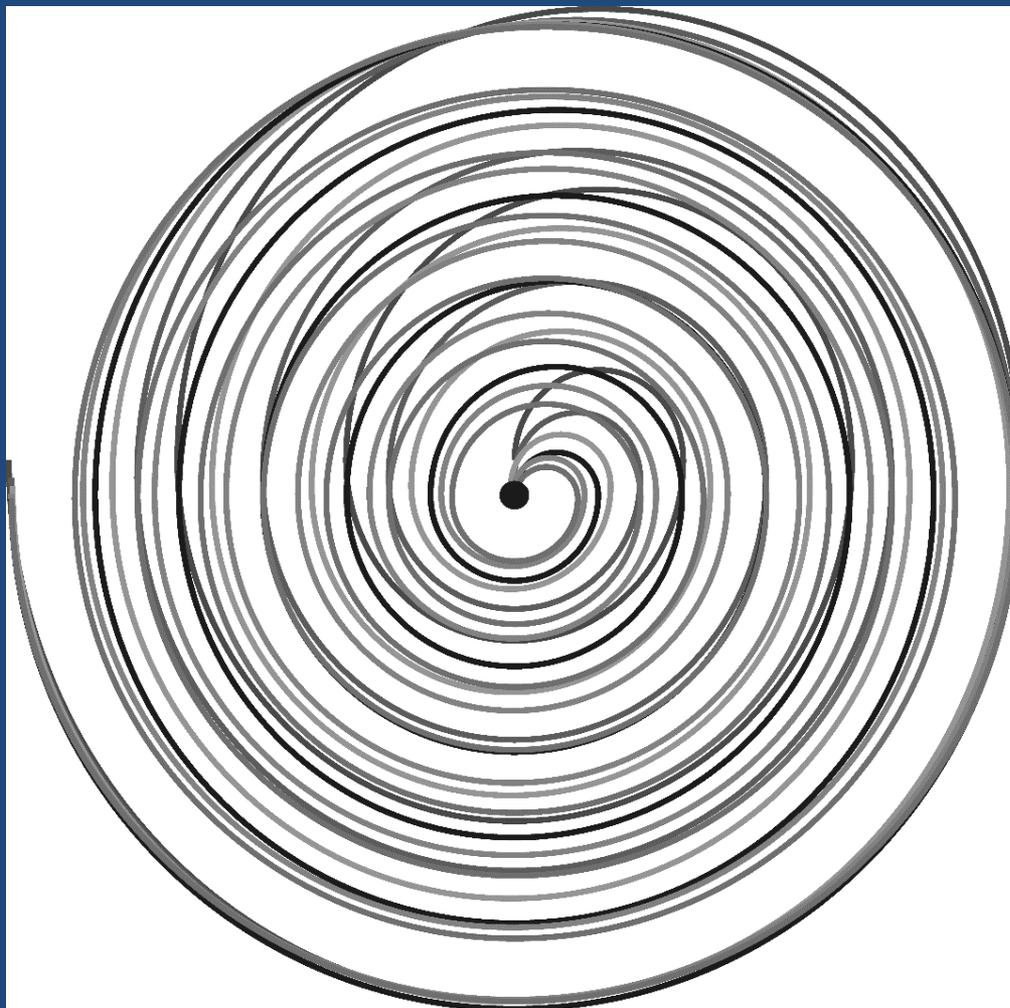
# Discontinuum



# Murmullos del páramo, ópera



# Continuum



# Exemples d'analyse

20 (1 1 1 9)

21 (1 1 2 8)

35 (1 1 1 8)

8 (1 1 10)

22 (1 1 3 7)

36 (1 1 1 2 7)

48 (1 1 1 1 7)

9 (1 2 9)

23 (1 1 4 6)

37 (1 1 1 3 6)

49 (1 1 1 1 2 6)

10 (1 3 8)

24 (1 1 5 5)

38 (1 1 1 4 5)

50 (1 1 1 1 3 5)

59 (1 1 1 1 1 1 6)

2 (1 1 1)

11 (1 4 7)

25 (1 2 2 7)

39 (1 1 2 2 6)

51 (1 1 1 1 4 4)

60 (1 1 1 1 1 2 5)

66 (1 1 1 1 1 1 5)

3 (2 10)

12 (1 5 6)

26 (1 2 3 6)

40 (1 1 2 3 5)

52 (1 1 1 2 2 5)

61 (1 1 1 1 1 3 4)

67 (1 1 1 1 1 1 2 4)

71 (1 1 1 1 1 1 1 4)

1 (1 12)

4 (3 9)

13 (2 2 8)

27 (1 2 4 5)

41 (1 1 2 4 4)

53 (1 1 1 2 3 4)

62 (1 1 1 1 2 2 4)

68 (1 1 1 1 1 1 3 3)

72 (1 1 1 1 1 1 1 2 3)

74 (1 1 1 1 1 1 1 1 3)

76 (1 1 1 1 1 1 1 1 1 2)

77 (1 1 1 1 1 1 1 1 1 1 1)

5 (4 8)

14 (2 3 7)

28 (1 3 3 5)

42 (1 1 3 3 4)

54 (1 1 1 3 3 3)

63 (1 1 1 1 2 3 3)

69 (1 1 1 1 1 2 2 3)

73 (1 1 1 1 1 2 2 2)

6 (5 7)

15 (2 4 6)

29 (1 3 4 4)

43 (1 2 2 2 5)

55 (1 1 2 2 2 4)

64 (1 1 1 2 2 2 3)

70 (1 1 1 1 2 2 2 2)

7 (6 6)

16 (2 5 5)

30 (2 2 2 6)

44 (1 2 2 3 4)

56 (1 1 2 2 3 3)

65 (1 1 2 2 2 2 2)

17 (3 3 6)

31 (2 2 3 5)

45 (1 2 3 3 3)

57 (1 2 2 2 2 3)

18 (3 4 5)

32 (2 2 4 4)

46 (2 2 2 2 4)

58 (2 2 2 2 2 2)

19 (4 4 4)

33 (2 3 3 4)

47 (2 2 2 3 3)

34 (3 3 3 3)

# Exemples d'analyse

The image displays a grid of musical staves, each representing a different interval or chord. The staves are numbered from 1 to 77. A red shape highlights the first 19 examples on the left side of the grid. Each staff shows a sequence of notes on a five-line staff, with a corresponding number below it. The numbers represent the intervals or chords being illustrated.

1 (1 12)	2 (1 11)	3 (2 10)	4 (3 9)	5 (4 8)	6 (5 7)	7 (6 6)	8 (1 1 10)	9 (1 2 9)	10 (1 3 8)	11 (1 4 7)	12 (1 5 6)	13 (2 2 8)	14 (2 3 7)	15 (2 4 6)	16 (2 5 5)	17 (3 3 6)	18 (3 4 5)	19 (4 4 4)	20 (1 1 1 9)	21 (1 1 2 8)	22 (1 1 3 7)	23 (1 1 4 6)	24 (1 1 5 5)	25 (1 2 2 7)	26 (1 2 3 6)	27 (1 2 4 5)	28 (1 3 3 5)	29 (1 3 4 4)	30 (2 2 2 6)	31 (2 2 3 5)	32 (2 2 4 4)	33 (2 3 3 4)	34 (3 3 3 3)	35 (1 1 1 1 8)	36 (1 1 1 2 7)	37 (1 1 1 3 6)	38 (1 1 1 4 5)	39 (1 1 2 2 6)	40 (1 1 2 3 5)	41 (1 1 2 4 4)	42 (1 1 3 3 4)	43 (1 2 2 5)	44 (1 2 2 3 4)	45 (1 2 3 3 3)	46 (2 2 2 2 4)	47 (2 2 2 3 3)	48 (1 1 1 1 1 7)	49 (1 1 1 1 2 6)	50 (1 1 1 1 3 5)	51 (1 1 1 1 4 4)	52 (1 1 1 2 2 5)	53 (1 1 1 2 3 4)	54 (1 1 1 3 3 3)	55 (1 1 2 2 2 4)	56 (1 1 2 2 3 3)	57 (1 2 2 2 2 3)	58 (2 2 2 2 2 2)	59 (1 1 1 1 1 1 6)	60 (1 1 1 1 1 2 5)	61 (1 1 1 1 1 3 4)	62 (1 1 1 1 2 2 4)	63 (1 1 1 1 2 3 3)	64 (1 1 1 2 2 2 3)	65 (1 1 2 2 2 2 2)	66 (1 1 1 1 1 1 1 5)	67 (1 1 1 1 1 1 2 4)	68 (1 1 1 1 1 1 3 3)	69 (1 1 1 1 1 2 2 3)	70 (1 1 1 1 2 2 2 2)	71 (1 1 1 1 1 1 1 1 4)	72 (1 1 1 1 1 1 1 2 3)	73 (1 1 1 1 1 1 2 2 2)	74 (1 1 1 1 1 1 1 1 1 3)	75 (1 1 1 1 1 1 1 1 2 2)	76 (1 1 1 1 1 1 1 1 1 1 2)	77 (1 1 1 1 1 1 1 1 1 1 1 1)
----------	----------	----------	---------	---------	---------	---------	------------	-----------	------------	------------	------------	------------	------------	------------	------------	------------	------------	------------	--------------	--------------	--------------	--------------	--------------	--------------	--------------	--------------	--------------	--------------	--------------	--------------	--------------	--------------	--------------	----------------	----------------	----------------	----------------	----------------	----------------	----------------	----------------	--------------	----------------	----------------	----------------	----------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	--------------------	--------------------	--------------------	--------------------	--------------------	--------------------	--------------------	----------------------	----------------------	----------------------	----------------------	----------------------	------------------------	------------------------	------------------------	--------------------------	--------------------------	----------------------------	------------------------------

# Exemples d'analyse

1 (1 12)

2 (1 11)

3 (2 10)

4 (3 9)

5 (4 8)

6 (5 7)

7 (6 6)

8 (1 1 10)

9 (1 2 9)

10 (1 3 8)

11 (1 4 7)

12 (1 5 6)

13 (2 2 8)

14 (2 3 7)

15 (2 4 6)

16 (2 5 5)

17 (3 3 6)

18 (3 4 5)

19 (4 4 4)

20 (1 1 1 9)

21 (1 1 2 8)

22 (1 1 3 7)

23 (1 1 4 6)

24 (1 1 5 5)

25 (1 2 2 7)

26 (1 2 3 6)

27 (1 2 4 5)

28 (1 3 3 5)

29 (1 3 4 4)

30 (2 2 2 6)

31 (2 2 3 5)

32 (2 2 4 4)

33 (2 3 3 4)

34 (3 3 3 3)

35 (1 1 1 1 8)

36 (1 1 1 2 7)

37 (1 1 1 3 6)

38 (1 1 1 4 5)

39 (1 1 2 2 6)

40 (1 2 3 5)

41 (1 1 2 4 4)

42 (1 1 3 3 4)

43 (1 2 2 2 5)

44 (1 2 2 3 4)

45 (1 2 3 3 3)

46 (2 2 2 2 4)

47 (2 2 2 3 3)

48 (1 1 1 1 1 7)

49 (1 1 1 1 2 6)

50 (1 1 1 1 3 5)

51 (1 1 1 1 4 4)

52 (1 1 1 2 2 5)

53 (1 1 1 2 3 4)

54 (1 1 1 3 3 3)

55 (1 1 2 2 2 4)

56 (1 1 2 2 3 3)

57 (1 2 2 2 2 3)

58 (2 2 2 2 2 2)

59 (1 1 1 1 1 1 6)

60 (1 1 1 1 1 2 5)

61 (1 1 1 1 1 3 4)

62 (1 1 1 1 1 2 2 4)

63 (1 1 1 1 2 3 3)

64 (1 1 1 2 2 2 3)

65 (1 1 2 2 2 2 2)

66 (1 1 1 1 1 1 1 5)

67 (1 1 1 1 1 1 2 4)

68 (1 1 1 1 1 1 3 3)

69 (1 1 1 1 1 2 2 3)

70 (1 1 1 1 2 2 2 2)

71 (1 1 1 1 1 1 1 1 4)

72 (1 1 1 1 1 1 1 2 3)

73 (1 1 1 1 1 1 2 2 2)

74 (1 1 1 1 1 1 1 1 1 3)

75 (1 1 1 1 1 1 1 1 1 2 2)

76 (1 1 1 1 1 1 1 1 1 1 2)

77 (1 1 1 1 1 1 1 1 1 1 1 1)



# Exemples d'analyse

The image displays a grid of musical staves, each containing a sequence of notes and a corresponding number. The notes are represented by circles with stems, and the numbers are placed below each staff. The grid is organized into several columns. A large red-shaded region on the left side of the page highlights a specific set of examples, including 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, and 77. A yellow square is located at the bottom left of the page.

Examples shown include:

- 1 (1 12)
- 2 (1 11)
- 3 (2 10)
- 4 (3 9)
- 5 (4 8)
- 6 (5 7)
- 7 (6 6)
- 8 (1 1 10)
- 9 (1 2 9)
- 10 (1 3 8)
- 11 (1 4 7)
- 12 (1 5 6)
- 13 (2 2 8)
- 14 (2 3 7)
- 15 (2 4 6)
- 16 (2 5 5)
- 17 (3 3 6)
- 18 (3 4 5)
- 19 (4 4 4)
- 20 (1 1 1 9)
- 21 (1 1 2 8)
- 22 (1 1 3 7)
- 23 (1 1 4 6)
- 24 (1 1 5 5)
- 25 (1 2 2 7)
- 26 (1 2 3 6)
- 27 (1 2 4 5)
- 28 (1 3 3 5)
- 29 (1 3 4 4)
- 30 (2 2 2 6)
- 31 (2 2 3 5)
- 32 (2 2 4 4)
- 33 (2 3 3 4)
- 34 (3 3 3 3)
- 35 (1 1 1 1 8)
- 36 (1 1 1 2 7)
- 37 (1 1 1 3 6)
- 38 (1 1 1 4 5)
- 39 (1 1 2 2 6)
- 40 (1 1 2 3 5)
- 41 (1 1 2 4 4)
- 42 (1 1 3 3 4)
- 43 (1 2 2 2 5)
- 44 (1 2 2 3 4)
- 45 (1 2 3 3 3)
- 46 (2 2 2 2 4)
- 47 (2 2 2 3 3)
- 48 (1 1 1 1 1 7)
- 49 (1 1 1 1 2 6)
- 50 (1 1 1 1 3 5)
- 51 (1 1 1 1 4 4)
- 52 (1 1 1 2 2 5)
- 53 (1 1 1 2 3 4)
- 54 (1 1 1 3 3 3)
- 55 (1 1 2 2 2 4)
- 56 (1 1 2 2 3 3)
- 57 (1 2 2 2 2 3)
- 58 (2 2 2 2 2 2)
- 59 (1 1 1 1 1 1 6)
- 60 (1 1 1 1 1 2 5)
- 61 (1 1 1 1 1 3 4)
- 62 (1 1 1 1 2 2 4)
- 63 (1 1 1 1 2 3 3)
- 64 (1 1 1 2 2 2 3)
- 65 (1 1 2 2 2 2 2)
- 66 (1 1 1 1 1 1 1 5)
- 67 (1 1 1 1 1 1 2 4)
- 68 (1 1 1 1 1 1 3 3)
- 69 (1 1 1 1 1 2 2 3)
- 70 (1 1 1 1 2 2 2 2)
- 71 (1 1 1 1 1 1 1 1 4)
- 72 (1 1 1 1 1 1 1 2 3)
- 73 (1 1 1 1 1 1 2 2 2)
- 74 (1 1 1 1 1 1 1 1 1 3)
- 75 (1 1 1 1 1 1 1 1 1 2 2)
- 76 (1 1 1 1 1 1 1 1 1 1 1 2)
- 77 (1 1 1 1 1 1 1 1 1 1 1 1 1)

# Exemples d'analyse

The image displays 77 numbered musical examples, each consisting of a staff with notes and a corresponding fingering sequence in parentheses below. The examples are arranged in a grid-like fashion, with some grouped into red and blue highlighted areas. A yellow line outlines a large section on the left side, encompassing examples 1 through 34.

Examples and their fingerings:

- 1 (1 12)
- 2 (1 11)
- 3 (2 10)
- 4 (3 9)
- 5 (4 8)
- 6 (5 7)
- 7 (6 6)
- 8 (1 1 10)
- 9 (1 2 9)
- 10 (1 3 8)
- 11 (1 4 7)
- 12 (1 5 6)
- 13 (2 2 8)
- 14 (2 3 7)
- 15 (2 4 6)
- 16 (2 5 5)
- 17 (3 3 6)
- 18 (3 4 5)
- 19 (4 4 4)
- 20 (1 1 1 9)
- 21 (1 1 2 8)
- 22 (1 1 3 7)
- 23 (1 1 4 6)
- 24 (1 1 5 5)
- 25 (1 2 2 7)
- 26 (1 2 3 6)
- 27 (1 2 4 5)
- 28 (1 3 3 5)
- 29 (1 3 4 4)
- 30 (2 2 2 6)
- 31 (2 2 3 5)
- 32 (2 2 4 4)
- 33 (2 3 3 4)
- 34 (3 3 3 3)
- 35 (1 1 1 1 8)
- 36 (1 1 1 2 7)
- 37 (1 1 1 3 6)
- 38 (1 1 1 4 5)
- 39 (1 1 2 2 6)
- 40 (1 1 2 3 5)
- 41 (1 1 2 4 4)
- 42 (1 1 3 3 4)
- 43 (1 2 2 2 5)
- 44 (1 2 3 3 4)
- 45 (1 2 3 3 3)
- 46 (2 2 2 2 4)
- 47 (2 2 2 3 3)
- 48 (1 1 1 1 1 7)
- 49 (1 1 1 1 2 6)
- 50 (1 1 1 1 3 5)
- 51 (1 1 1 1 4 4)
- 52 (1 1 1 2 2 5)
- 53 (1 1 1 2 3 4)
- 54 (1 1 1 3 3 3)
- 55 (1 1 2 2 2 4)
- 56 (1 1 2 2 3 3)
- 57 (1 2 2 2 3)
- 58 (2 2 2 2 2 2)
- 59 (1 1 1 1 1 1 6)
- 60 (1 1 1 1 1 2 5)
- 61 (1 1 1 1 1 3 4)
- 62 (1 1 1 1 2 2 4)
- 63 (1 1 1 1 2 3 3)
- 64 (1 1 1 2 2 2 3)
- 65 (1 1 2 2 2 2 2)
- 66 (1 1 1 1 1 1 1 5)
- 67 (1 1 1 1 1 1 2 4)
- 68 (1 1 1 1 1 1 1 3 3)
- 69 (1 1 1 1 1 2 2 3)
- 70 (1 1 1 1 2 2 2 2)
- 71 (1 1 1 1 1 1 1 1 1 4)
- 72 (1 1 1 1 1 1 1 1 2 3)
- 73 (1 1 1 1 1 1 2 2 2)
- 74 (1 1 1 1 1 1 1 1 1 1 3)
- 75 (1 1 1 1 1 1 1 1 1 2 2)
- 76 (1 1 1 1 1 1 1 1 1 1 1 2)
- 77 (1 1 1 1 1 1 1 1 1 1 1 1 1)

# Exemples d'analyse

20 (1 1 1 9)

21 (1 1 2 8)

35 (1 1 1 1 8)

8 (1 1 10)

22 (1 1 3 7)

36 (1 1 1 2 7)

48 (1 1 1 1 1 7)

9 (1 2 9)

23 (1 1 4 6)

37 (1 1 1 3 6)

49 (1 1 1 1 2 6)

10 (1 3 8)

24 (1 1 5 5)

38 (1 1 1 4 5)

50 (1 1 1 1 3 5)

59 (1 1 1 1 1 1 6)

2 (1 1 1)

11 (1 4 7)

25 (1 2 2 7)

39 (1 1 2 2 6)

51 (1 1 1 1 4 4)

60 (1 1 1 1 1 2 5)

66 (1 1 1 1 1 1 1 5)

3 (2 10)

12 (1 5 6)

26 (1 2 3 6)

40 (1 1 2 3 5)

52 (1 1 1 2 2 5)

61 (1 1 1 1 1 3 4)

67 (1 1 1 1 1 1 2 4)

71 (1 1 1 1 1 1 1 1 4)

4 (3 9)

13 (2 2 8)

27 (1 2 4 5)

41 (1 1 2 4 4)

53 (1 1 1 2 3 4)

62 (1 1 1 1 2 2 4)

68 (1 1 1 1 1 1 3 3)

72 (1 1 1 1 1 1 1 2 3)

74 (1 1 1 1 1 1 1 1 1 3)

76 (1 1 1 1 1 1 1 1 1 1 2)

77 (1 1 1 1 1 1 1 1 1 1 1 1 1)

1 (1 12)

5 (4 8)

28 (1 3 3 5)

42 (1 1 3 3 4)

54 (1 1 1 3 3 3)

63 (1 1 1 1 2 3 3)

69 (1 1 1 1 1 2 2 3)

73 (1 1 1 1 1 1 2 2 2)

6 (5 7)

15 (2 4 6)

29 (1 3 4 4)

43 (1 2 2 2 5)

55 (1 1 2 2 2 4)

64 (1 1 1 2 2 2 3)

70 (1 1 1 1 2 2 2 2)

7 (6 6)

16 (2 5 5)

30 (2 2 2 6)

44 (1 2 2 3 4)

56 (1 1 2 2 3 3)

65 (1 1 2 2 2 2 2)

17 (3 3 6)

31 (2 2 3 5)

45 (1 2 3 3 3)

57 (1 2 2 2 2 3)

18 (3 4 5)

32 (2 2 4 4)

46 (2 2 2 2 4)

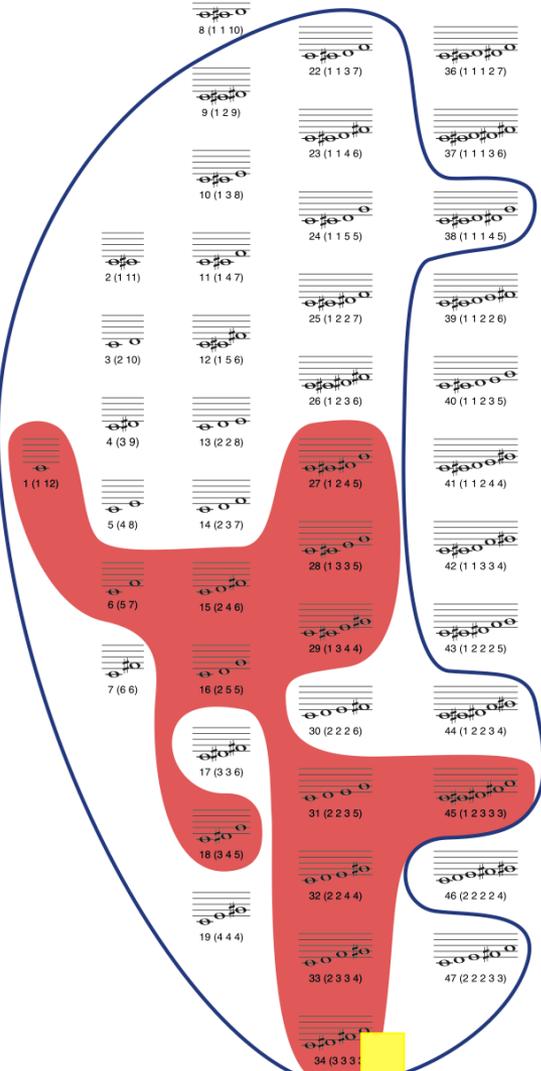
58 (2 2 2 2 2 2)

19 (4 4 4)

33 (2 3 3 4)

47 (2 2 2 3 3)

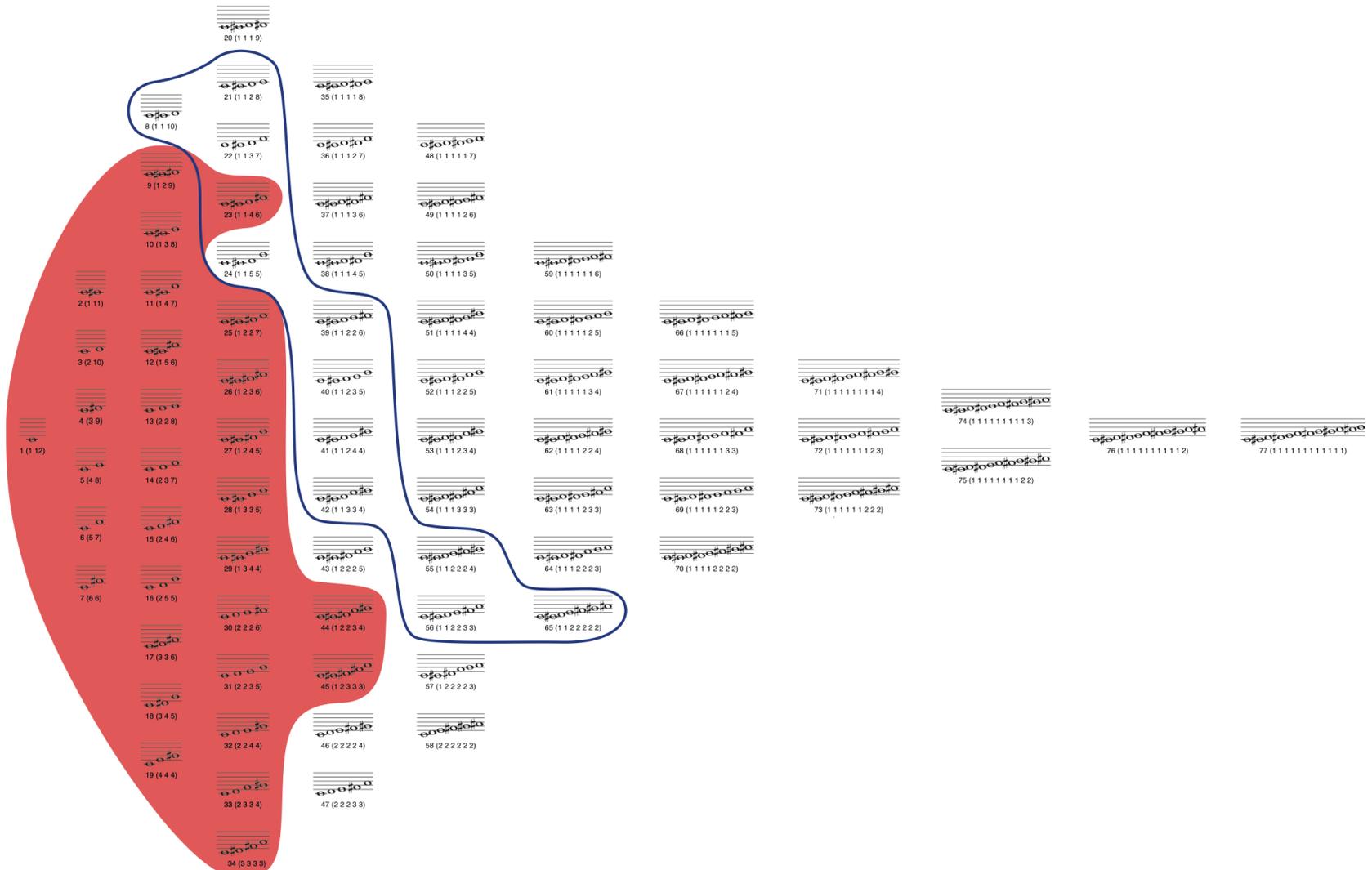
34 (3 3 3 3)



# Exemples d'analyse

The image displays 77 musical staves, each representing a unique chord voicing. Each staff is labeled with a number and a sequence of digits in parentheses, such as 1 (1 12), 2 (1 11), 3 (2 10), 4 (3 9), 5 (4 8), 6 (5 7), 7 (6 6), 8 (1 1 10), 9 (1 2 9), 10 (1 3 8), 11 (1 4 7), 12 (1 5 6), 13 (2 2 8), 14 (2 3 7), 15 (2 4 6), 16 (2 5 5), 17 (3 3 6), 18 (3 4 5), 19 (4 4 4), 20 (1 1 1 9), 21 (1 1 2 8), 22 (1 1 3 7), 23 (1 1 4 6), 24 (1 1 5 5), 25 (1 2 2 7), 26 (1 2 3 6), 27 (1 2 4 5), 28 (1 3 3 5), 29 (1 3 4 4), 30 (2 2 2 6), 31 (2 2 3 5), 32 (2 2 4 4), 33 (2 3 3 4), 34 (3 3 3 3), 35 (1 1 1 1 8), 36 (1 1 1 2 7), 37 (1 1 1 3 6), 38 (1 1 1 4 5), 39 (1 1 2 2 6), 40 (1 1 2 3 5), 41 (1 1 2 4 4), 42 (1 1 3 3 4), 43 (1 2 2 2 5), 44 (1 2 2 3 4), 45 (1 2 3 3 3), 46 (2 2 2 2 4), 47 (2 2 2 3 3), 48 (1 1 1 1 1 7), 49 (1 1 1 1 2 6), 50 (1 1 1 1 3 5), 51 (1 1 1 1 4 4), 52 (1 1 1 2 2 5), 53 (1 1 1 2 3 4), 54 (1 1 1 3 3 3), 55 (1 1 2 2 2 4), 56 (1 1 2 2 3 3), 57 (1 2 2 2 2 3), 58 (2 2 2 2 2 2), 59 (1 1 1 1 1 1 6), 60 (1 1 1 1 1 2 5), 61 (1 1 1 1 1 3 4), 62 (1 1 1 1 2 2 4), 63 (1 1 1 1 2 3 3), 64 (1 1 1 2 2 2 3), 65 (1 1 2 2 2 2 2), 66 (1 1 1 1 1 1 1 5), 67 (1 1 1 1 1 1 2 4), 68 (1 1 1 1 1 1 3 3), 69 (1 1 1 1 1 2 2 3), 70 (1 1 1 1 2 2 2 2), 71 (1 1 1 1 1 1 1 1 4), 72 (1 1 1 1 1 1 1 2 3), 73 (1 1 1 1 1 1 2 2 2), 74 (1 1 1 1 1 1 1 1 1 3), 75 (1 1 1 1 1 1 1 1 2 2), 76 (1 1 1 1 1 1 1 1 1 1 2), 77 (1 1 1 1 1 1 1 1 1 1 1 1).

# Exemples d'analyse





# Exemples d'analyse

The diagram illustrates musical notation examples, numbered 1 through 77, arranged in a grid-like pattern. The examples are grouped into two main areas: a red area on the left (examples 1-34) and a yellow area on the right (examples 35-77). A blue outline traces a path through the examples, starting from the top left and moving generally downwards and to the right. A small yellow square is located below example 58.

Examples 1-34 (Red Area):

- 1 (1 12)
- 2 (1 11)
- 3 (2 10)
- 4 (3 9)
- 5 (4 8)
- 6 (5 7)
- 7 (6 6)
- 8 (1 1 10)
- 9 (1 2 9)
- 10 (1 3 8)
- 11 (1 4 7)
- 12 (1 5 6)
- 13 (2 2 8)
- 14 (2 3 7)
- 15 (2 4 6)
- 16 (2 5 5)
- 17 (3 3 6)
- 18 (3 4 5)
- 19 (4 4 4)
- 20 (1 1 1 9)
- 21 (1 1 2 8)
- 22 (1 1 3 7)
- 23 (1 1 4 6)
- 24 (1 1 5 5)
- 25 (1 2 2 7)
- 26 (1 2 3 6)
- 27 (1 2 4 5)
- 28 (1 3 3 5)
- 29 (1 3 4 4)
- 30 (2 2 2 6)
- 31 (2 2 3 5)
- 32 (2 2 4 4)
- 33 (2 3 3 4)
- 34 (3 3 3 3)

Examples 35-77 (Yellow Area):

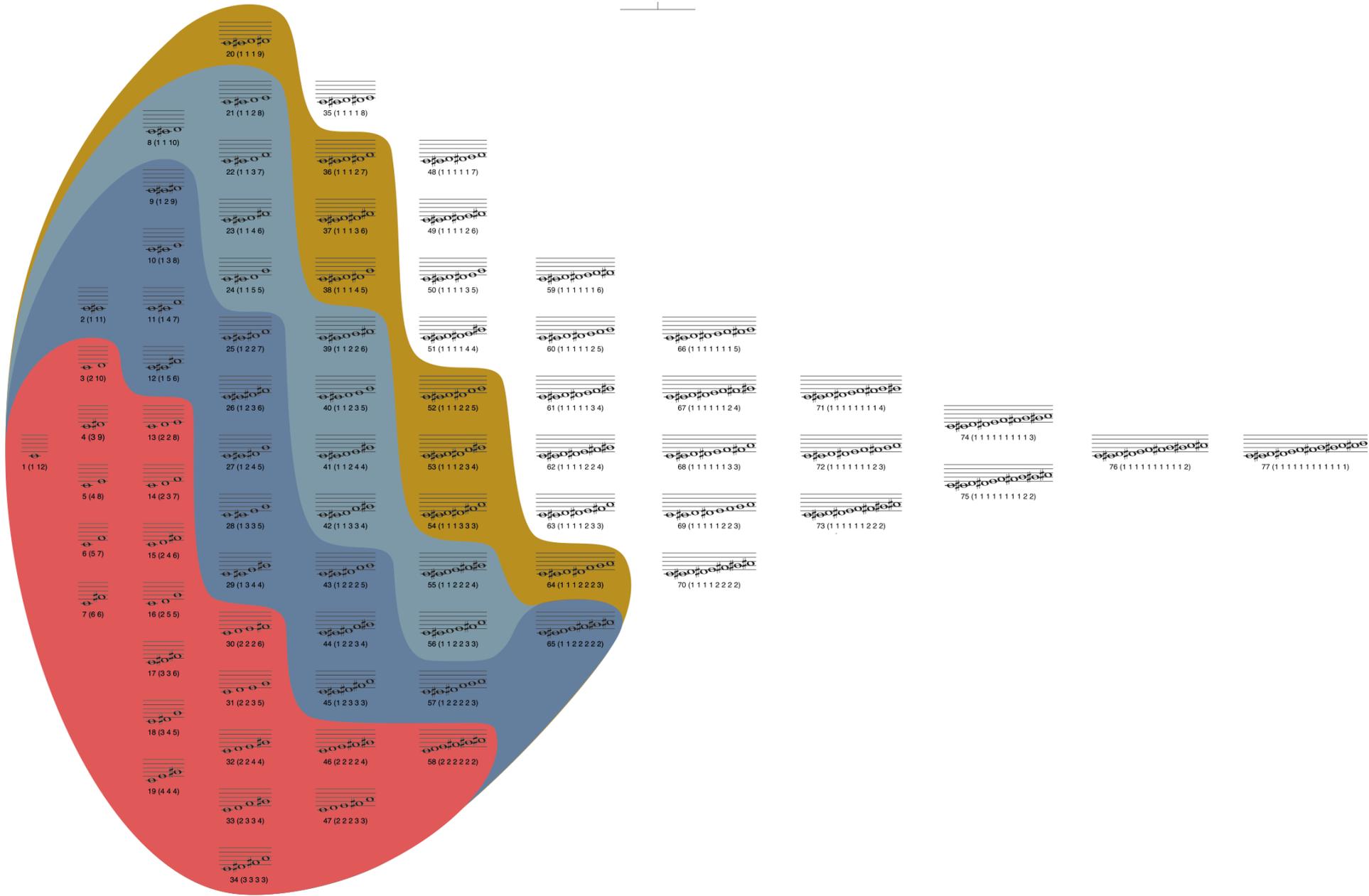
- 35 (1 1 1 1 8)
- 36 (1 1 1 2 7)
- 37 (1 1 1 3 6)
- 38 (1 1 1 4 5)
- 39 (1 1 2 2 6)
- 40 (1 1 2 3 5)
- 41 (1 1 2 4 4)
- 42 (1 1 3 3 4)
- 43 (1 2 2 2 5)
- 44 (1 2 2 3 4)
- 45 (1 2 3 3 3)
- 46 (2 2 2 2 4)
- 47 (2 2 2 3 3)
- 48 (1 1 1 1 1 7)
- 49 (1 1 1 1 2 6)
- 50 (1 1 1 1 3 5)
- 51 (1 1 1 1 4 4)
- 52 (1 1 1 2 2 5)
- 53 (1 1 1 2 3 4)
- 54 (1 1 1 3 3 3)
- 55 (1 1 2 2 2 4)
- 56 (1 1 2 2 3 3)
- 57 (1 2 2 2 2 3)
- 58 (2 2 2 2 2 2)
- 59 (1 1 1 1 1 1 6)
- 60 (1 1 1 1 1 2 5)
- 61 (1 1 1 1 1 3 4)
- 62 (1 1 1 1 2 2 4)
- 63 (1 1 1 1 2 3 3)
- 64 (1 1 1 2 2 2 3)
- 65 (1 1 2 2 2 2 2)
- 66 (1 1 1 1 1 1 1 5)
- 67 (1 1 1 1 1 2 4)
- 68 (1 1 1 1 1 3 3)
- 69 (1 1 1 1 2 2 3)
- 70 (1 1 1 1 2 2 2 2)
- 71 (1 1 1 1 1 1 1 1 4)
- 72 (1 1 1 1 1 1 1 2 3)
- 73 (1 1 1 1 1 1 2 2 2)
- 74 (1 1 1 1 1 1 1 1 1 3)
- 75 (1 1 1 1 1 1 1 1 1 2 2)
- 76 (1 1 1 1 1 1 1 1 1 1 2)
- 77 (1 1 1 1 1 1 1 1 1 1 1 1)

# Exemples d'analyse

The image displays a musical score analysis diagram consisting of 77 numbered musical staves, each with a unique fingering sequence in parentheses below it. The staves are arranged in a grid-like fashion, with some staves grouped together by colored regions: a large red region on the left side, a blue region in the middle, and a yellow region at the bottom left. The staves are numbered 1 through 77, with the numbering increasing from left to right and top to bottom. Each staff contains musical notation, including notes, rests, and accidentals, with a specific fingering sequence indicated below it. The diagram illustrates various musical structures and patterns, such as scales, arpeggios, and complex rhythmic figures, which are analyzed through these numbered examples.

Staff Number	Fingering Sequence
1	(1 12)
2	(1 11)
3	(2 10)
4	(3 9)
5	(4 8)
6	(5 7)
7	(6 6)
8	(1 1 10)
9	(1 2 9)
10	(1 3 8)
11	(1 4 7)
12	(1 5 6)
13	(2 2 8)
14	(2 3 7)
15	(2 4 6)
16	(2 5 5)
17	(3 3 6)
18	(3 4 5)
19	(4 4 4)
20	(1 1 1 9)
21	(1 1 2 8)
22	(1 1 3 7)
23	(1 1 4 6)
24	(1 1 5 5)
25	(1 2 2 7)
26	(1 2 3 6)
27	(1 2 4 5)
28	(1 3 3 5)
29	(1 3 4 4)
30	(2 2 2 6)
31	(2 2 3 5)
32	(2 2 4 4)
33	(2 3 3 4)
34	(3 3 3 3)
35	(1 1 1 1 8)
36	(1 1 1 2 7)
37	(1 1 1 3 6)
38	(1 1 1 4 5)
39	(1 1 2 2 6)
40	(1 1 2 3 5)
41	(1 1 2 4 4)
42	(1 1 3 3 4)
43	(1 2 2 2 5)
44	(1 2 2 3 4)
45	(1 2 3 3 3)
46	(2 2 2 2 4)
47	(2 2 2 3 3)
48	(1 1 1 1 1 7)
49	(1 1 1 1 2 6)
50	(1 1 1 1 3 5)
51	(1 1 1 1 4 4)
52	(1 1 1 2 2 5)
53	(1 1 1 2 3 4)
54	(1 1 1 3 3 3)
55	(1 1 2 2 2 4)
56	(1 1 2 2 3 3)
57	(1 2 2 2 2 3)
58	(2 2 2 2 2 2)
59	(1 1 1 1 1 1 6)
60	(1 1 1 1 1 2 5)
61	(1 1 1 1 1 3 4)
62	(1 1 1 1 2 2 4)
63	(1 1 1 1 2 3 3)
64	(1 1 1 2 2 2 3)
65	(1 1 2 2 2 2 2)
66	(1 1 1 1 1 1 1 5)
67	(1 1 1 1 1 1 2 4)
68	(1 1 1 1 1 1 3 3)
69	(1 1 1 1 1 2 2 3)
70	(1 1 1 1 2 2 2 2)
71	(1 1 1 1 1 1 1 1 4)
72	(1 1 1 1 1 1 1 2 3)
73	(1 1 1 1 1 1 1 2 2 2)
74	(1 1 1 1 1 1 1 1 1 3)
75	(1 1 1 1 1 1 1 1 1 2 2)
76	(1 1 1 1 1 1 1 1 1 1 1 2)
77	(1 1 1 1 1 1 1 1 1 1 1 1 1 1)

# Exemples d'analyse



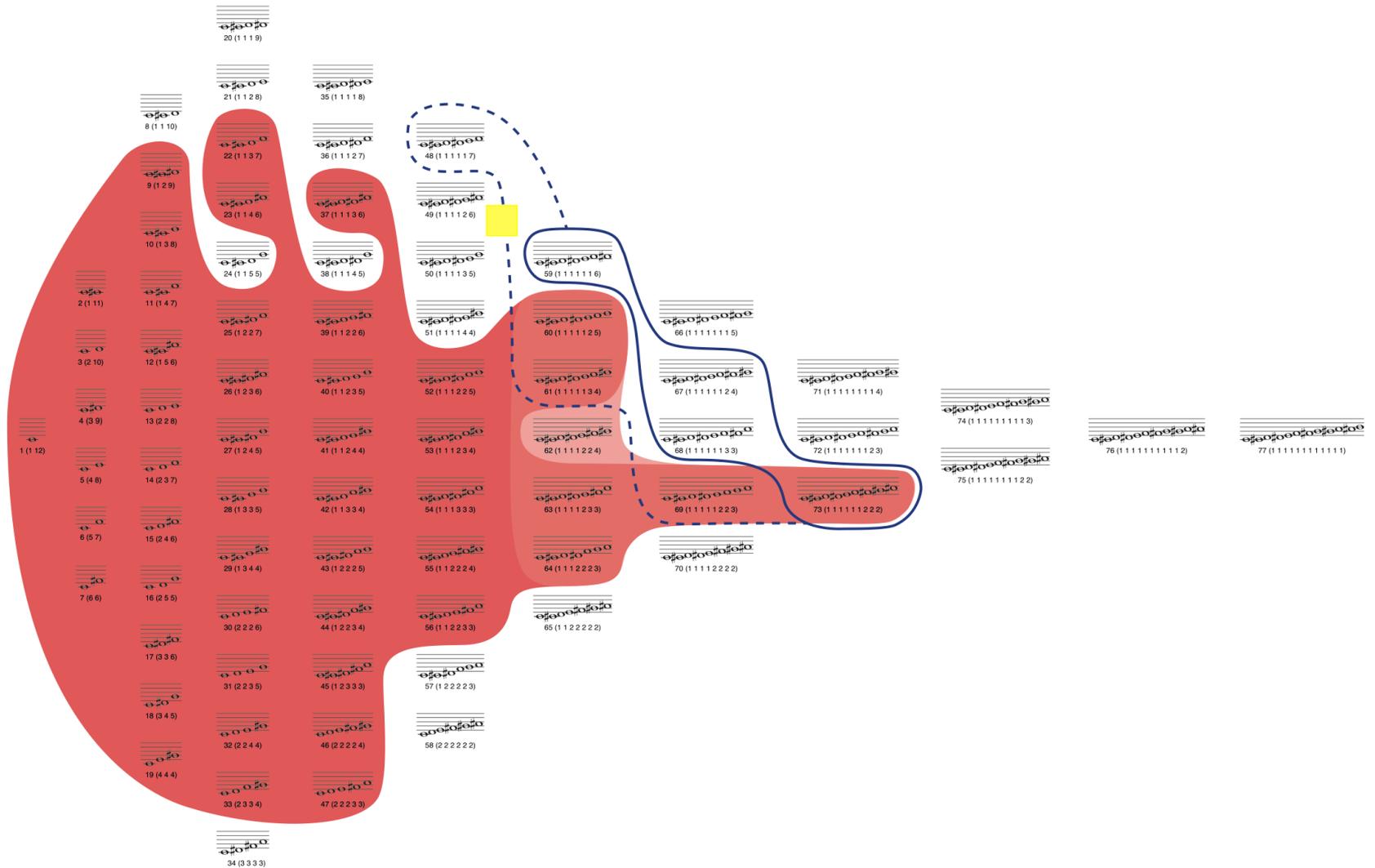
# Exemples d'analyse

The image displays a grid of 77 musical staves, each containing a specific chord and its corresponding voicing notation. The staves are arranged in a grid-like fashion, with the first column containing staves 1 through 19, and subsequent columns containing staves 20 through 77. A red path highlights a sequence of chords starting from staff 1 and ending at staff 70. A blue line connects staff 35 to staff 70. A yellow square is placed on staff 60.

The chords and their voicings are as follows:

- 1 (1 12)
- 2 (1 11)
- 3 (2 10)
- 4 (3 9)
- 5 (4 8)
- 6 (5 7)
- 7 (6 6)
- 8 (1 1 10)
- 9 (1 2 9)
- 10 (1 3 8)
- 11 (1 4 7)
- 12 (1 5 6)
- 13 (2 8)
- 14 (2 3 7)
- 15 (2 4 6)
- 16 (2 5 5)
- 17 (3 3 6)
- 18 (3 4 5)
- 19 (4 4 4)
- 20 (1 1 1 9)
- 21 (1 1 2 8)
- 22 (1 1 3 7)
- 23 (1 1 4 6)
- 24 (1 1 5 5)
- 25 (1 2 2 7)
- 26 (1 2 3 6)
- 27 (1 2 4 5)
- 28 (1 3 3 5)
- 29 (1 3 4 4)
- 30 (2 2 2 6)
- 31 (2 2 3 5)
- 32 (2 2 4 4)
- 33 (2 3 3 4)
- 34 (3 3 3 3)
- 35 (1 1 1 8)
- 36 (1 1 1 2 7)
- 37 (1 1 1 3 6)
- 38 (1 1 1 4 5)
- 39 (1 1 2 2 6)
- 40 (1 1 2 3 5)
- 41 (1 1 2 4 4)
- 42 (1 1 3 3 4)
- 43 (1 2 2 2 5)
- 44 (1 2 2 3 4)
- 45 (1 2 3 3 3)
- 46 (2 2 2 4 4)
- 47 (2 2 2 3 3)
- 48 (1 1 1 1 1 7)
- 49 (1 1 1 1 2 6)
- 50 (1 1 1 1 3 5)
- 51 (1 1 1 1 4 4)
- 52 (1 1 1 2 2 5)
- 53 (1 1 1 2 3 4)
- 54 (1 1 1 3 3 3)
- 55 (1 1 2 2 2 4)
- 56 (1 1 2 2 3 3)
- 57 (1 2 2 2 3 3)
- 58 (2 2 2 2 2 2)
- 59 (1 1 1 1 1 1 6)
- 60 (1 1 1 1 1 2 5)
- 61 (1 1 1 1 1 3 4)
- 62 (1 1 1 1 2 2 4)
- 63 (1 1 1 1 2 3 3)
- 64 (1 1 1 2 2 2 3)
- 65 (1 1 2 2 2 2 2)
- 66 (1 1 1 1 1 1 1 5)
- 67 (1 1 1 1 1 1 2 4)
- 68 (1 1 1 1 1 1 3 3)
- 69 (1 1 1 1 1 2 2 3)
- 70 (1 1 1 1 2 2 2 2)
- 71 (1 1 1 1 1 1 1 1 4)
- 72 (1 1 1 1 1 1 1 2 3)
- 73 (1 1 1 1 1 2 2 2 2)
- 74 (1 1 1 1 1 1 1 1 1 3)
- 75 (1 1 1 1 1 1 1 1 1 2 2)
- 76 (1 1 1 1 1 1 1 1 1 1 1 2)
- 77 (1 1 1 1 1 1 1 1 1 1 1 1 1)

# Exemples d'analyse



# Exemples d'analyse

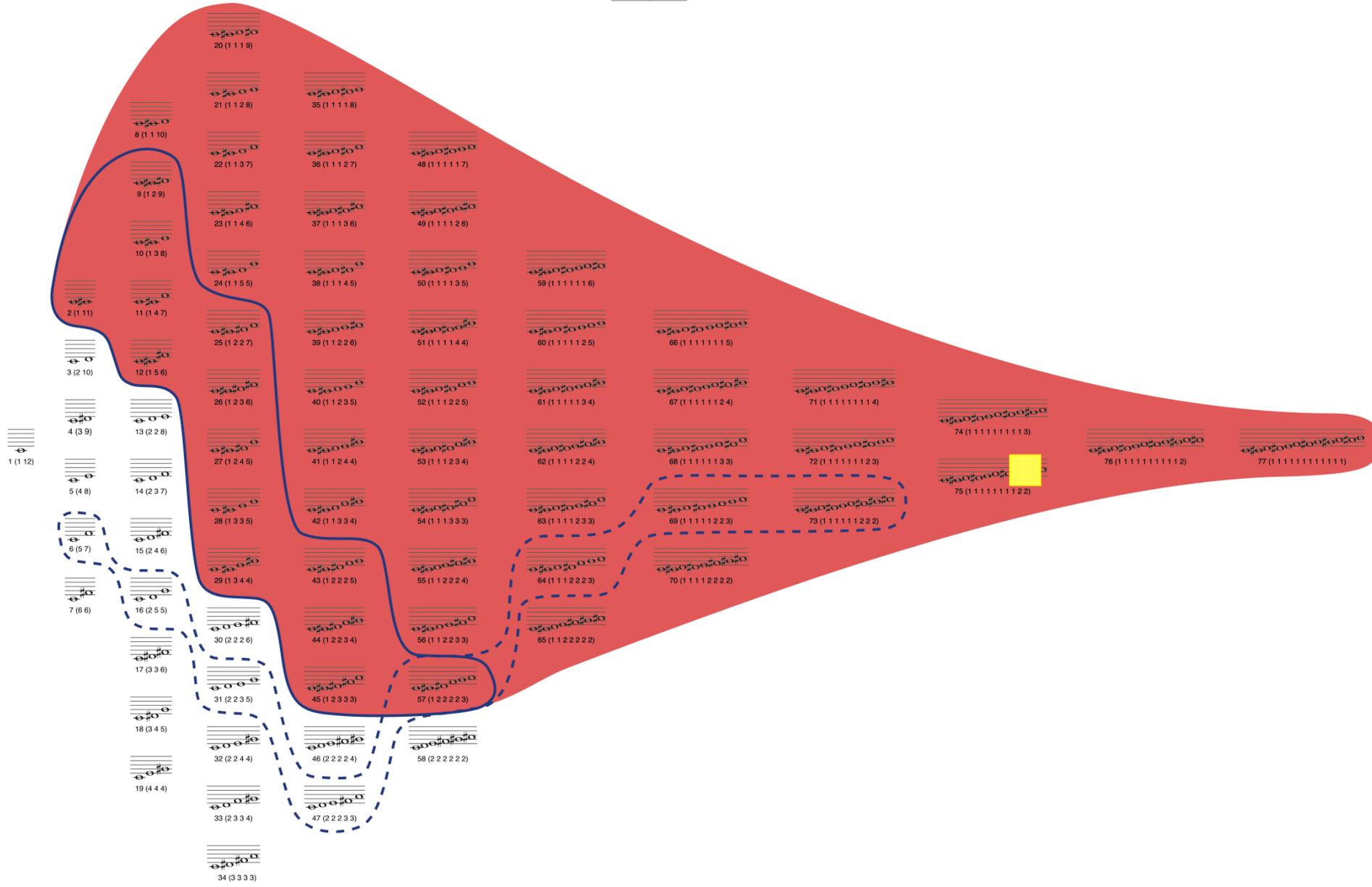
The image displays 77 musical staves, each representing a unique chord voicing. Each staff is labeled with a number and a sequence of digits in parentheses, such as 1 (1 12) or 77 (1 1 1 1 1 1 1 1 1 1). The staves are arranged in a grid-like fashion, with some staves grouped together by a red shape and others by a blue shape. The red shape highlights a path starting from staff 1 and ending at staff 51. The blue shape highlights a path starting from staff 51 and ending at staff 77. The numerical labels are arranged in a way that suggests a sequence or progression of chords.

Staff Number	Label
1	1 (1 12)
2	2 (1 11)
3	3 (2 10)
4	4 (3 9)
5	5 (4 8)
6	6 (5 7)
7	7 (6 6)
8	8 (1 1 10)
9	9 (1 2 9)
10	10 (1 3 8)
11	11 (1 4 7)
12	12 (1 5 6)
13	13 (2 2 8)
14	14 (2 3 7)
15	15 (2 4 6)
16	16 (2 5 5)
17	17 (3 3 6)
18	18 (3 4 5)
19	19 (4 4 4)
20	20 (1 1 1 9)
21	21 (1 1 2 8)
22	22 (1 1 3 7)
23	23 (1 1 4 6)
24	24 (1 1 5 5)
25	25 (1 2 2 7)
26	26 (1 2 3 6)
27	27 (1 2 4 5)
28	28 (1 3 3 5)
29	29 (1 3 4 4)
30	30 (2 2 2 6)
31	31 (2 2 3 5)
32	32 (2 2 4 4)
33	33 (2 3 3 4)
34	34 (3 3 3 3)
35	35 (1 1 1 1 8)
36	36 (1 1 1 2 7)
37	37 (1 1 1 3 6)
38	38 (1 1 1 4 5)
39	39 (1 1 2 2 6)
40	40 (1 2 3 5)
41	41 (1 2 4 4)
42	42 (1 3 3 4)
43	43 (1 2 2 2 5)
44	44 (1 2 2 3 4)
45	45 (1 2 3 3 3)
46	46 (2 2 2 4 4)
47	47 (2 2 2 3 3)
48	48 (1 1 1 1 1 7)
49	49 (1 1 1 1 2 6)
50	50 (1 1 1 1 3 5)
51	51 (1 1 1 1 4 4)
52	52 (1 1 1 2 2 5)
53	53 (1 1 1 2 3 4)
54	54 (1 1 1 3 3 3)
55	55 (1 1 2 2 2 4)
56	56 (1 1 2 2 3 3)
57	57 (1 2 2 2 2 3)
58	58 (2 2 2 2 2 2)
59	59 (1 1 1 1 1 1 6)
60	60 (1 1 1 1 1 1 2 5)
61	61 (1 1 1 1 1 1 3 4)
62	62 (1 1 1 1 1 2 2 4)
63	63 (1 1 1 1 2 3 3)
64	64 (1 1 1 2 2 2 3)
65	65 (1 1 2 2 2 2 2)
66	66 (1 1 1 1 1 1 1 1 5)
67	67 (1 1 1 1 1 1 1 2 4)
68	68 (1 1 1 1 1 1 1 3 3)
69	69 (1 1 1 1 1 2 2 3)
70	70 (1 1 1 1 2 2 2 2)
71	71 (1 1 1 1 1 1 1 1 1 4)
72	72 (1 1 1 1 1 1 1 1 2 3)
73	73 (1 1 1 1 1 1 2 2 2)
74	74 (1 1 1 1 1 1 1 1 1 1 3)
75	75 (1 1 1 1 1 1 1 1 1 2 2)
76	76 (1 1 1 1 1 1 1 1 1 1 1 2)
77	77 (1 1 1 1 1 1 1 1 1 1 1 1 1)

# Exemples d'analyse



# Exemples d'analyse



# Exemples d'analyse

The diagram illustrates musical notation examples, numbered 1 through 77, arranged in a grid-like pattern. The examples are grouped into several distinct regions:

- Red Region (Central Cluster):** Examples 20 through 66, forming a large, irregular shape. Example 50 is highlighted with a yellow square.
- Blue Region (Vertical Column):** Examples 1 through 19, forming a vertical column on the left side.
- Other Regions:** Examples 21-34, 35-49, 51-70, 71-77, and 78-80 are arranged in various other positions, some forming smaller clusters.

Each example consists of a musical staff with notes and a corresponding numerical sequence below it. The sequences are often composed of digits 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80.

# Exemples d'analyse

The diagram illustrates musical notation examples for numbers 1 through 77. The examples are arranged in a grid-like pattern. A large red shape highlights the first 34 examples, and a blue shape highlights examples 35 through 77. Each example consists of a musical staff with notes and a number with its prime factorization in parentheses.

Number	Prime Factorization
1	(1 12)
2	(1 11)
3	(2 10)
4	(3 9)
5	(4 8)
6	(5 7)
7	(6 6)
8	(1 1 10)
9	(1 2 9)
10	(1 3 8)
11	(1 4 7)
12	(1 5 6)
13	(2 8)
14	(2 3 7)
15	(2 4 6)
16	(2 5 5)
17	(3 3 6)
18	(3 4 5)
19	(4 4 4)
20	(1 1 1 9)
21	(1 1 2 8)
22	(1 1 3 7)
23	(1 1 4 6)
24	(1 1 5 5)
25	(1 2 2 7)
26	(1 2 3 6)
27	(1 2 4 5)
28	(1 3 3 5)
29	(1 3 4 4)
30	(2 2 2 6)
31	(2 2 3 5)
32	(2 2 4 4)
33	(2 3 3 4)
34	(3 3 3 3)
35	(1 1 1 1 8)
36	(1 1 1 2 7)
37	(1 1 1 3 6)
38	(1 1 1 4 5)
39	(1 1 2 2 6)
40	(1 1 2 3 5)
41	(1 1 2 4 4)
42	(1 1 3 3 4)
43	(1 2 2 2 5)
44	(1 2 2 3 4)
45	(1 2 3 3 3)
46	(2 2 2 2 4)
47	(2 2 2 3 3)
48	(1 1 1 1 1 7)
49	(1 1 1 1 2 6)
50	(1 1 1 1 3 5)
51	(1 1 1 1 4 4)
52	(1 1 1 2 2 5)
53	(1 1 1 2 3 4)
54	(1 1 1 3 3 3)
55	(1 1 2 2 2 4)
56	(1 1 2 2 3 3)
57	(1 2 2 2 2 3)
58	(2 2 2 2 2 2)
59	(1 1 1 1 1 1 6)
60	(1 1 1 1 1 2 5)
61	(1 1 1 1 1 3 4)
62	(1 1 1 1 2 2 4)
63	(1 1 1 1 2 3 3)
64	(1 1 1 2 2 2 3)
65	(1 1 2 2 2 2 2)
66	(1 1 1 1 1 1 1 5)
67	(1 1 1 1 1 1 1 2 4)
68	(1 1 1 1 1 1 1 3 3)
69	(1 1 1 1 1 2 2 3)
70	(1 1 1 1 2 2 2 2 2)
71	(1 1 1 1 1 1 1 1 1 4)
72	(1 1 1 1 1 1 1 1 2 3)
73	(1 1 1 1 1 1 2 2 2 2)
74	(1 1 1 1 1 1 1 1 1 1 3)
75	(1 1 1 1 1 1 1 1 1 2 2)
76	(1 1 1 1 1 1 1 1 1 1 1 2)
77	(1 1 1 1 1 1 1 1 1 1 1 1 1)

# Exemples d'analyse

The image displays a grid of 77 musical examples, each consisting of a staff with a treble clef, a key signature of one sharp (F#), and a sequence of notes. The examples are numbered 1 through 77. A large red shape highlights a significant portion of the grid, starting from example 1 and extending to example 75. A blue circle highlights example 71, and a yellow square highlights example 72. The notes in the staves are represented by black circles, and the numbers below each staff indicate the sequence of notes.

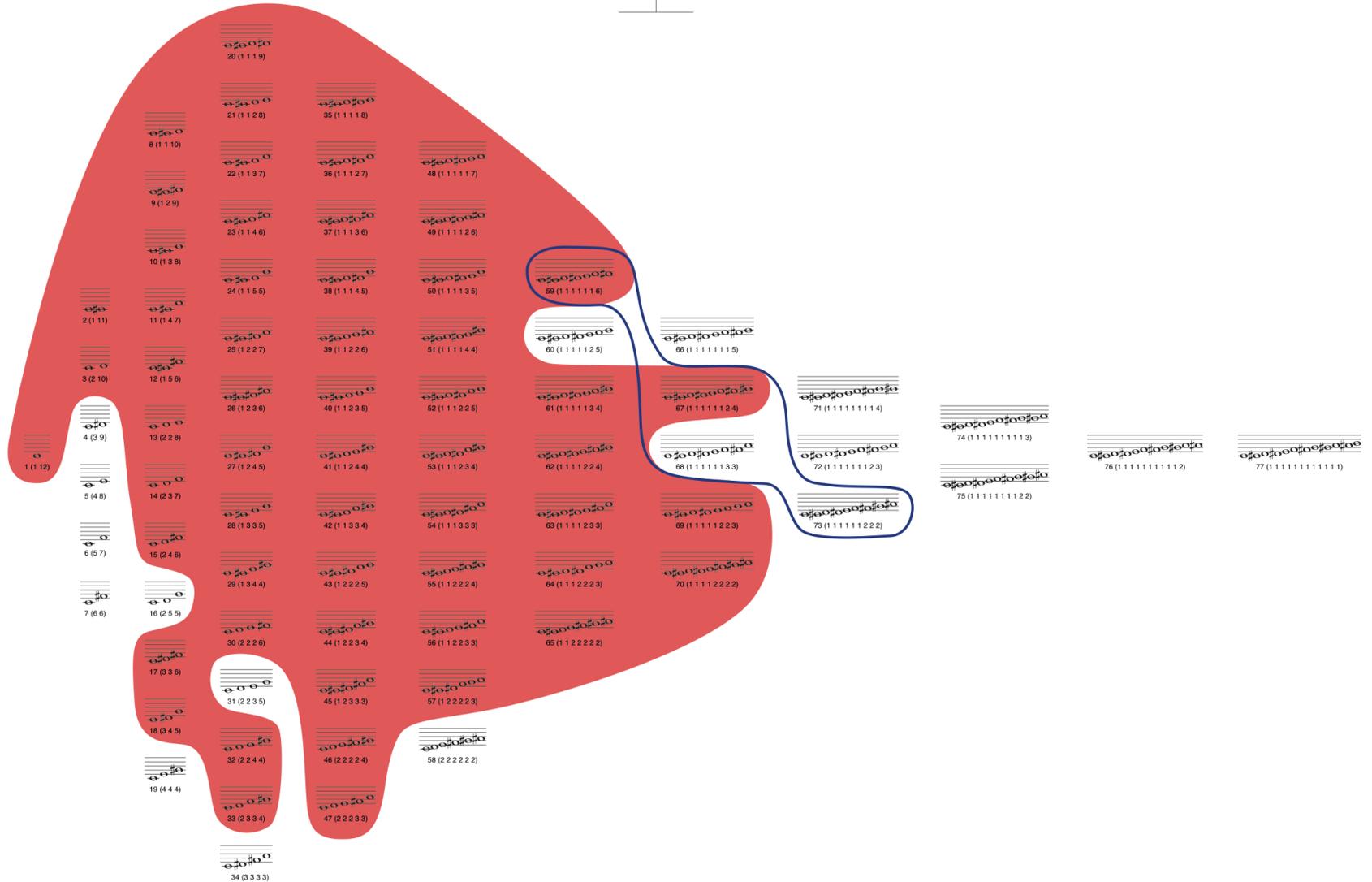
Example	Notes
1	(1 12)
2	(1 11)
3	(2 10)
4	(3 9)
5	(4 8)
6	(5 7)
7	(6 6)
8	(1 1 10)
9	(1 2 9)
10	(1 3 8)
11	(1 4 7)
12	(1 5 6)
13	(2 2 8)
14	(2 3 7)
15	(2 4 6)
16	(2 5 5)
17	(3 3 6)
18	(3 4 5)
19	(4 4 4)
20	(1 1 1 9)
21	(1 1 2 8)
22	(1 1 3 7)
23	(1 1 4 6)
24	(1 1 5 5)
25	(1 2 2 7)
26	(1 2 3 6)
27	(1 2 4 5)
28	(1 3 3 5)
29	(1 3 4 4)
30	(2 2 2 6)
31	(2 2 3 5)
32	(2 2 4 4)
33	(2 2 3 3 4)
34	(3 3 3 3)
35	(1 1 1 1 8)
36	(1 1 1 2 7)
37	(1 1 1 3 6)
38	(1 1 1 4 5)
39	(1 1 2 2 6)
40	(1 1 2 3 5)
41	(1 1 2 4 4)
42	(1 1 3 3 4)
43	(1 2 2 2 5)
44	(1 2 2 3 4)
45	(1 2 3 3 3)
46	(2 2 2 2 4)
47	(2 2 2 3 3)
48	(1 1 1 1 1 7)
49	(1 1 1 1 2 6)
50	(1 1 1 1 3 5)
51	(1 1 1 1 4 4)
52	(1 1 1 2 2 5)
53	(1 1 1 2 3 4)
54	(1 1 1 3 3 3)
55	(1 1 2 2 2 4)
56	(1 1 2 2 3 3)
57	(1 2 2 2 2 3)
58	(2 2 2 2 2 2)
59	(1 1 1 1 1 1 6)
60	(1 1 1 1 1 2 5)
61	(1 1 1 1 1 3 4)
62	(1 1 1 1 2 2 4)
63	(1 1 1 1 2 3 3)
64	(1 1 1 2 2 2 3)
65	(1 1 2 2 2 2 2)
66	(1 1 1 1 1 1 1 5)
67	(1 1 1 1 1 1 2 4)
68	(1 1 1 1 1 1 3 3)
69	(1 1 1 1 1 2 2 3)
70	(1 1 1 1 1 2 2 2 2)
71	(1 1 1 1 1 1 1 1 4)
72	(1 1 1 1 1 1 1 2 3)
73	(1 1 1 1 1 1 2 2 2)
74	(1 1 1 1 1 1 1 1 1 3)
75	(1 1 1 1 1 1 1 1 2 2)
76	(1 1 1 1 1 1 1 1 1 1 2)
77	(1 1 1 1 1 1 1 1 1 1 1 1)

# Exemples d'analyse

The diagram displays 77 musical examples, each consisting of a staff with a key signature of one sharp (F#) and a sequence of notes. The examples are numbered 1 through 77. The notes are represented by black dots on the staff lines. The examples are arranged in a grid-like pattern, with some examples grouped together in red-shaded regions. A blue line traces a path through the examples, starting from the top left and ending at the bottom right. A yellow square is located on the right side of the diagram, near example 66.

Examples 1 through 77 are arranged in a grid-like pattern, with some examples grouped together in red-shaded regions. The examples are numbered 1 through 77. The notes are represented by black dots on the staff lines. The examples are arranged in a grid-like pattern, with some examples grouped together in red-shaded regions. A blue line traces a path through the examples, starting from the top left and ending at the bottom right. A yellow square is located on the right side of the diagram, near example 66.

# Exemples d'analyse



# Exemples d'analyse

The image displays a collection of musical notation examples, each consisting of a five-line staff with notes and a corresponding number below it. The examples are arranged in a grid-like fashion, with some examples highlighted by yellow squares. The numbers range from 1 to 77, representing different musical configurations or analyses. The red shape is irregular and covers most of the page, with yellow squares placed on examples 1, 8, 9, 11, 21, 31, 34, 35, 48, 59, 66, 67, 71, 74, and 77.

Number	Number	Number	Number	Number	Number
1 (1 12)	8 (1 1 10)	15 (2 4 6)	22 (1 1 3 7)	29 (1 3 4 4)	36 (1 1 1 2 7)
2 (1 11)	9 (1 2 9)	16 (2 5 5)	23 (1 1 4 6)	30 (2 2 2 6)	37 (1 1 1 3 6)
3 (2 10)	10 (1 3 8)	17 (3 3 6)	24 (1 1 5 5)	31 (2 2 3 5)	38 (1 1 1 4 5)
4 (3 9)	11 (1 4 7)	18 (3 4 5)	25 (1 2 2 7)	32 (2 2 4 4)	39 (1 1 2 2 6)
5 (4 8)	12 (1 5 6)	19 (4 4 4)	26 (1 2 3 6)	33 (2 3 3 4)	40 (1 1 2 3 5)
6 (5 7)	13 (2 2 8)	20 (1 1 1 9)	27 (1 2 4 5)	34 (3 3 3 3)	41 (1 1 2 4 4)
7 (6 6)	14 (2 3 7)	21 (1 1 2 8)	28 (1 3 3 5)	35 (1 1 1 1 8)	42 (1 1 3 3 4)
	15 (2 4 6)	22 (1 1 3 7)	29 (1 3 4 4)	43 (1 2 2 2 5)	48 (1 1 1 1 1 7)
	16 (2 5 5)	23 (1 1 4 6)	30 (2 2 2 6)	44 (1 2 2 3 4)	49 (1 1 1 1 2 6)
	17 (3 3 6)	24 (1 1 5 5)	31 (2 2 3 5)	45 (1 2 3 3 3)	50 (1 1 1 1 3 5)
	18 (3 4 5)	25 (1 2 2 7)	32 (2 2 4 4)	46 (2 2 2 2 4)	59 (1 1 1 1 1 1 6)
	19 (4 4 4)	26 (1 2 3 6)	33 (2 3 3 4)	47 (2 2 2 3 3)	60 (1 1 1 1 1 2 5)
	20 (1 1 1 9)	27 (1 2 4 5)	34 (3 3 3 3)	48 (1 1 1 1 1 1 7)	66 (1 1 1 1 1 1 1 5)
	21 (1 1 2 8)	28 (1 3 3 5)	35 (1 1 2 2 2 2)	49 (1 1 1 1 2 6)	67 (1 1 1 1 1 1 2 4)
	22 (1 1 3 7)	29 (1 3 4 4)	36 (1 1 2 2 3 3)	50 (1 1 1 1 2 2 2 2)	71 (1 1 1 1 1 1 1 1 4)
	23 (1 1 4 6)	30 (2 2 2 6)	37 (1 1 2 2 2 3)	51 (1 1 1 1 1 4 4)	74 (1 1 1 1 1 1 1 1 1 3)
	24 (1 1 5 5)	31 (2 2 3 5)	38 (1 1 1 4 5)	52 (1 1 1 1 2 2 5)	75 (1 1 1 1 1 1 1 1 2 2)
	25 (1 2 2 7)	32 (2 2 4 4)	39 (1 1 2 2 6)	53 (1 1 1 2 3 4)	76 (1 1 1 1 1 1 1 1 1 1 2)
	26 (1 2 3 6)	33 (2 3 3 4)	40 (1 1 2 3 5)	54 (1 1 1 3 3 3)	77 (1 1 1 1 1 1 1 1 1 1 1 1)
	27 (1 2 4 5)	34 (3 3 3 3)	41 (1 1 2 4 4)	55 (1 1 2 2 2 4)	
	28 (1 3 3 5)	35 (1 1 2 2 2 2)	42 (1 1 3 3 4)	56 (1 1 2 2 3 3)	
	29 (1 3 4 4)	36 (1 1 2 2 3 3)	43 (1 2 2 2 5)	57 (1 2 2 2 2 3)	
	30 (2 2 2 6)	37 (1 1 2 2 2 3)	44 (1 2 2 3 4)	58 (2 2 2 2 2 2)	
	31 (2 2 3 5)	38 (1 1 1 4 5)	45 (1 2 3 3 3)		
	32 (2 2 4 4)	39 (1 1 2 2 6)	46 (2 2 2 2 4)		
	33 (2 3 3 4)	40 (1 1 2 3 5)	47 (2 2 2 3 3)		
	34 (3 3 3 3)	41 (1 1 2 4 4)			
		42 (1 1 3 3 4)			
		43 (1 2 2 2 5)			
		44 (1 2 2 3 4)			
		45 (1 2 3 3 3)			
		46 (2 2 2 2 4)			
		47 (2 2 2 3 3)			
		48 (1 1 1 1 1 7)			
		49 (1 1 1 1 2 6)			
		50 (1 1 1 1 3 5)			
		51 (1 1 1 1 4 4)			
		52 (1 1 1 1 2 2 5)			
		53 (1 1 1 2 3 4)			
		54 (1 1 1 3 3 3)			
		55 (1 1 2 2 2 4)			
		56 (1 1 2 2 3 3)			
		57 (1 2 2 2 2 3)			
		58 (2 2 2 2 2 2)			
		59 (1 1 1 1 1 1 6)			
		60 (1 1 1 1 1 2 5)			
		61 (1 1 1 1 1 3 4)			
		62 (1 1 1 1 2 2 4)			
		63 (1 1 1 1 2 3 3)			
		64 (1 1 1 2 2 2 3)			
		65 (1 1 2 2 2 2 2)			
		66 (1 1 1 1 1 1 1 5)			
		67 (1 1 1 1 1 1 2 4)			
		68 (1 1 1 1 1 1 1 3 3)			
		69 (1 1 1 1 1 2 2 3)			
		70 (1 1 1 1 1 2 2 2 2)			
		71 (1 1 1 1 1 1 1 1 4)			
		72 (1 1 1 1 1 1 1 1 2 3)			
		73 (1 1 1 1 1 1 1 2 2 2)			
		74 (1 1 1 1 1 1 1 1 1 3)			
		75 (1 1 1 1 1 1 1 1 2 2)			
		76 (1 1 1 1 1 1 1 1 1 1 2)			
		77 (1 1 1 1 1 1 1 1 1 1 1 1)			

# Exemples d'analyse

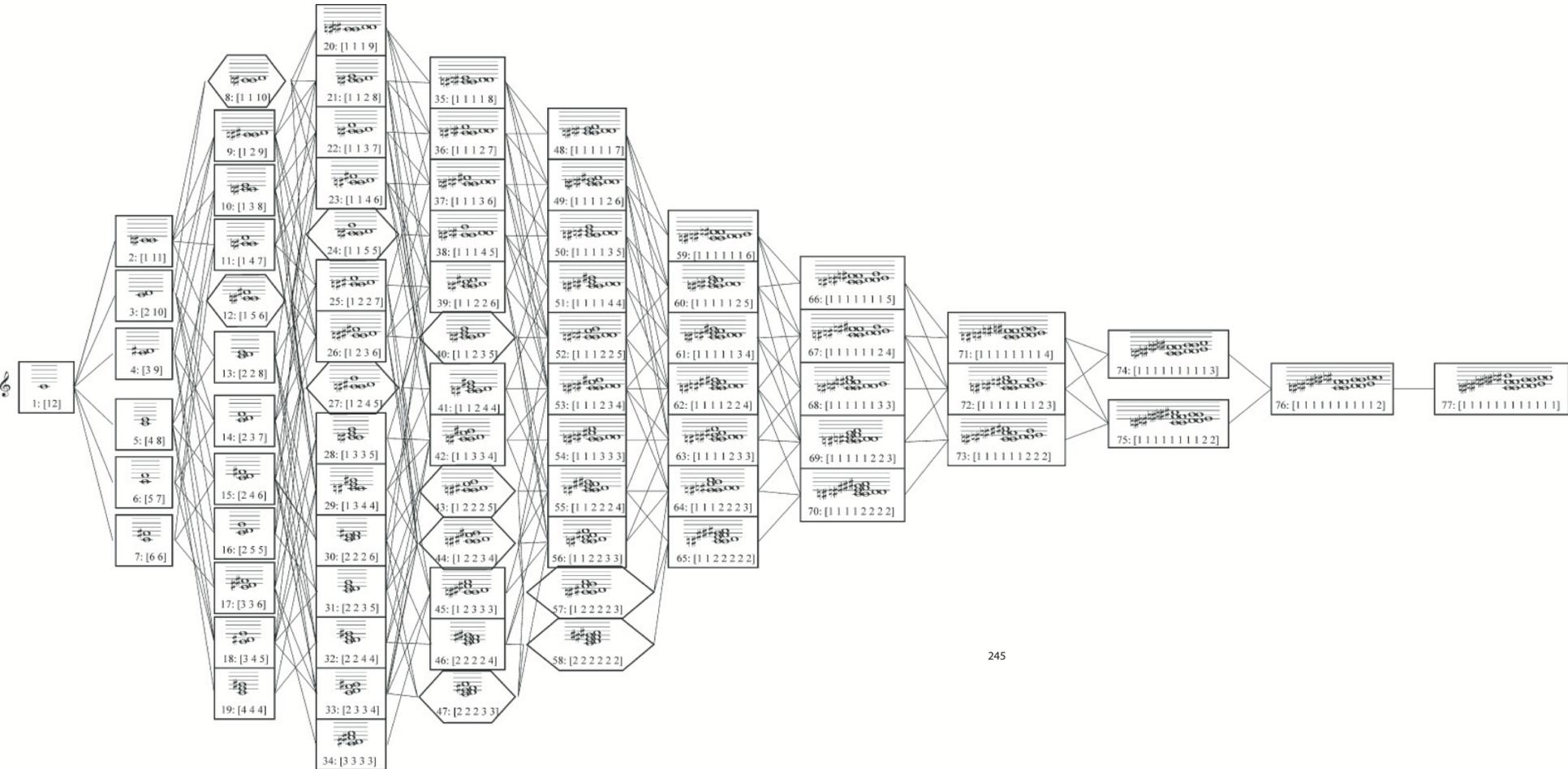
The image displays a large red silhouette of a human head and neck, filled with musical notation and numbers. The notation consists of staves with notes and rests, and numbers in parentheses below them. The numbers represent pitch classes. The silhouette is divided into several regions by blue lines, and some regions are highlighted with yellow squares.

The numbers in parentheses are arranged in a grid-like pattern, corresponding to the musical notation. The numbers range from 1 to 77, with some numbers appearing multiple times. The numbers are arranged in a way that suggests a sequence or a set of numbers. The numbers are arranged in a way that suggests a sequence or a set of numbers.

Examples of numbers in parentheses:

- 1 (1 12)
- 2 (1 11)
- 3 (2 10)
- 4 (3 9)
- 5 (4 8)
- 6 (5 7)
- 7 (6 6)
- 8 (1 110)
- 9 (1 2 9)
- 10 (1 3 8)
- 11 (1 4 7)
- 12 (1 5 6)
- 13 (2 2 8)
- 14 (2 3 7)
- 15 (2 4 6)
- 16 (2 5 5)
- 17 (3 3 6)
- 18 (3 4 5)
- 19 (4 4 4)
- 20 (1 1 1 9)
- 21 (1 1 2 8)
- 22 (1 1 3 7)
- 23 (1 1 4 6)
- 24 (1 1 5 5)
- 25 (1 2 2 7)
- 26 (1 2 3 6)
- 27 (1 2 4 5)
- 28 (1 3 3 5)
- 29 (1 3 4 4)
- 30 (2 2 2 6)
- 31 (2 2 3 5)
- 32 (2 2 4 4)
- 33 (2 3 3 4)
- 34 (3 3 3 3)
- 35 (1 1 1 1 8)
- 36 (1 1 1 2 7)
- 37 (1 1 1 3 6)
- 38 (1 1 1 4 5)
- 39 (1 1 2 2 6)
- 40 (1 1 2 3 5)
- 41 (1 1 2 4 4)
- 42 (1 1 3 3 4)
- 43 (1 2 2 2 5)
- 44 (1 2 2 3 4)
- 45 (1 2 3 3 3)
- 46 (2 2 2 2 4)
- 47 (2 2 2 3 3)
- 48 (1 1 1 1 1 7)
- 49 (1 1 1 1 2 6)
- 50 (1 1 1 1 3 5)
- 51 (1 1 1 1 4 4)
- 52 (1 1 1 2 2 5)
- 53 (1 1 1 2 3 4)
- 54 (1 1 1 3 3 3)
- 55 (1 1 2 2 2 4)
- 56 (1 1 2 2 3 3)
- 57 (1 2 2 2 2 3)
- 58 (2 2 2 2 2 2)
- 59 (1 1 1 1 1 1 6)
- 60 (1 1 1 1 1 2 5)
- 61 (1 1 1 1 1 3 4)
- 62 (1 1 1 1 2 2 4)
- 63 (1 1 1 1 2 3 3)
- 64 (1 1 1 2 2 2 3)
- 65 (1 1 2 2 2 2 2)
- 66 (1 1 1 1 1 1 1 5)
- 67 (1 1 1 1 1 1 2 4)
- 68 (1 1 1 1 1 1 3 3)
- 69 (1 1 1 1 1 2 2 3)
- 70 (1 1 1 1 2 2 2 2)
- 71 (1 1 1 1 1 1 1 1 4)
- 72 (1 1 1 1 1 1 1 2 3)
- 73 (1 1 1 1 1 1 2 2 2)
- 74 (1 1 1 1 1 1 1 3)
- 75 (1 1 1 1 1 1 1 1 2 2)
- 76 (1 1 1 1 1 1 1 1 1 1 2)
- 77 (1 1 1 1 1 1 1 1 1 1 1 1)

# Exemples d'analyse



# Exemples d'analyse

