Wonders of the Musical World Series 10

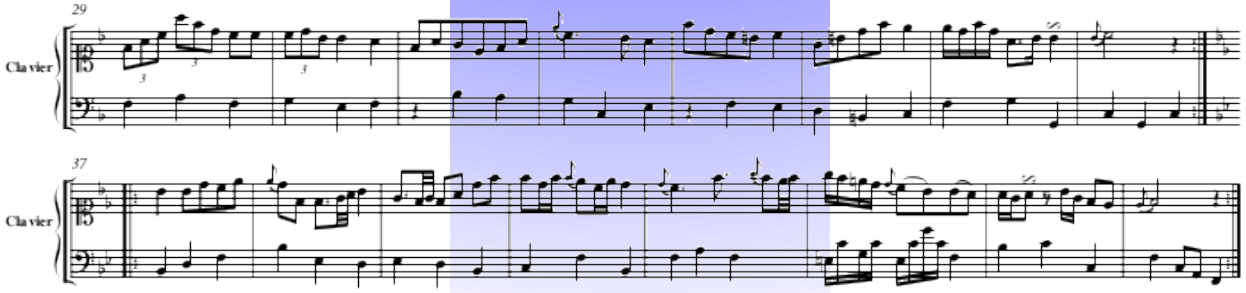
Musical Dice Game - Minuets and Trios I

based on

Musicalische Cabala

by Franciscus Schola (1773)

compiled by I. T. Author



Libre Edition Press

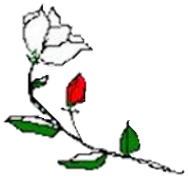
Musical Dice Game - Minuets and Trios I

based on
Musicalische Cabala
by Franciscus Schola (1773)

Author:
I. T. Author

Supervisor:
Dr. Communio Sanctorum

Wonders of the Musical World Series 10



Libre Edition Press
June 21, 2025

Contents

1 Introduction **3**

2 *Musicalische Cabala* **4**

2.1 Rules . . . 4

Cabalas for Parts I, II and III . . . 4

2.2 Table of Measures . . . 5

Musicalische Cabala - Set 1 of measures (page 1/10) . . . 5

Musicalische Cabala - Set 1 of measures (page 2/10) . . . 6

Musicalische Cabala - Set 1 of measures (page 3/10) . . . 7

Musicalische Cabala - Set 1 of measures (page 4/10) . . . 8

Musicalische Cabala - Set 1 of measures (page 5/10) . . . 9

Musicalische Cabala - Set 1 of measures (page 6/10) . . . 10

Musicalische Cabala - Set 1 of measures (page 7/10) . . . 11

Musicalische Cabala - Set 1 of measures (page 8/10) . . . 12

Musicalische Cabala - Set 1 of measures (page 9/10) . . . 13

Musicalische Cabala - Set 1 of measures (page 10/10) . . . 14

3 Related Links **15**

4 Acknowledgments **15**

5 Twenty (20) Selected Minuets based on *Musicalische Cabala* **16**

1-2-3-5-2-2-5-1-4-1-3-6-3-4-2-1-6-3-2-4-5-6-5-4-4-1-2-1-5-2-1-3-4-3-2-1-6-4-3-5-5-5-6-6 . . . 16

1-5-3-1-6-3-5-2-3-6-3-6-6-5-6-4-2-3-4-2-4-3-4-4-4-2-4-2-2-3-4-6-6-6-6-4-3-1-3-3-6-5-1-4 . . . 16

2-1-6-1-2-4-4-2-3-2-4-1-5-4-6-3-2-6-1-3-1-6-6-5-4-4-6-4-3-2-2-5-2-1-2-3-6-1-2-6-5-1-2-1 . . . 17

2-4-4-4-3-3-1-4-1-5-1-1-3-1-4-5-1-1-3-4-1-2-6-4-4-4-3-2-5-1-2-1-5-2-1-4-5-1-6-1-4-2-5-2 . . . 18

2-6-4-1-5-2-4-6-6-5-1-5-6-2-6-4-5-5-6-4-5-3-4-1-5-6-4-2-2-1-1-6-1-4-3-4-3-2-6-4-2-6-6-2 . . . 19

3-1-5-2-1-3-4-2-4-4-3-2-2-1-3-4-6-2-4-2-5-3-1-3-4-2-2-3-2-6-2-6-3-6-4-6-1-4-1-4-3-2-2-6 . . . 20

3-3-1-4-5-5-1-2-5-2-4-1-3-2-5-4-5-2-5-6-5-4-3-5-5-1-4-3-3-1-5-5-6-1-2-6-3-3-4-6-5-2-1-6 . . . 21

3-3-6-4-1-4-2-4-1-3-1-1-6-1-2-6-6-6-5-1-5-4-1-3-3-4-4-3-5-2-6-1-5-5-1-2-2-6-1-1-3-1-3-2 . . . 22

3-5-3-2-5-3-4-4-4-6-6-1-1-1-3-1-6-6-3-1-5-5-3-1-1-5-2-6-3-3-5-6-2-1-6-1-3-3-4-3-2-1-3-1 . . . 23

4-1-2-4-5-1-2-5-2-2-4-6-2-5-2-2-6-2-3-3-5-5-5-4-4-3-5-1-5-3-2-4-1-2-6-5-3-4-5-5-4-4-3-3 . . . 24

4-5-6-6-4-6-4-5-5-6-6-5-4-5-4-2-2-5-5-2-6-4-5-2-5-4-6-4-1-2-6-1-6-1-4-5-4-6-1-3-2-1-5-3 . . . 25

4-6-2-1-5-4-2-3-2-6-2-6-5-5-4-3-4-4-6-5-6-5-3-6-4-4-1-2-6-5-3-1-6-1-5-3-3-2-4-5-1-1-2-6 . . . 26

5-1-6-4-6-3-3-5-6-1-3-1-1-6-2-3-5-6-4-4-1-2-1-5-2-1-1-3-4-6-5-1-3-4-4-3-3-4-1-1-6-4-4-5 . . . 27

5-2-3-2-1-3-2-5-1-1-4-6-4-6-2-4-2-5-4-3-6-3-1-5-1-5-3-2-1-4-4-2-1-5-6-4-3-6-3-6-4-1-4-2 . . . 28

5-3-4-2-5-4-6-6-5-6-1-3-6-2-6-2-5-5-4-5-1-5-3-4-4-4-1-6-3-1-2-4-3-5-4-2-3-1-2-6-4-1-6-3 . . . 29

6-1-4-5-6-2-5-6-3-3-3-1-3-2-3-5-5-2-1-4-4-5-5-1-4-5-4-6-5-3-2-1-5-5-5-1-2-6-3-4-5-3-2-3 . . . 30

6-3-6-3-5-4-5-2-1-4-6-4-2-1-4-2-3-3-1-1-6-4-4-2-1-2-1-3-4-4-2-6-4-3-6-6-3-4-3-5-3-5-1-6 . . . 31

6-4-3-2-6-5-5-6-5-4-4-4-3-2-1-2-2-1-1-4-2-5-6-6-4-5-5-6-1-6-1-1-3-4-4-5-6-3-5-2-5-4-1-6 . . . 32

6-4-6-5-1-4-6-1-6-1-4-3-1-2-4-1-1-6-1-4-6-3-6-1-1-1-2-4-1-4-2-1-6-3-2-6-3-4-1-1-1-2-5-6 . . . 33

6-5-4-5-1-4-5-3-1-6-4-2-6-6-3-2-6-1-6-2-2-5-1-2-6-5-1-5-5-4-4-4-6-2-5-6-6-1-4-1-6-3-5-2 . . . 34

6 License **35**

1 Introduction[1]

"Musicalishe Cabala
Vermitelst welcher man
à Tre auf ein Travers. Violin. und Basso
wie auch Menuets und Tria Vor das Clavicen
mit einem eintzigen würfel-Spiehl,
ohne aller mihe und Khopfbrechen
zu Componieren Vermag.
Erfunden Von mir
Francesu Schola Chirurgu.
d. 10: Augustÿ 1773."

"Musical Cabala
showing a method by which one,
for three: a flute, violin, and basso,
as well as minuets and trio for the clavier,
with a single die,
without any effort and headache,
to compose.
Discovered by me
Francesu Schola Surgeon
d. 10: August 1773."

Thus run the German title and corresponding English translation of the Musical Dice Game (MDG) that was authored by Franciscus Schola in 1773 (Schola, 1773). Rightly and interestingly so, as the Rules provided in this work allow a non-professional musician to generate ("compose") nearly 17.3 decillions (17.3×10^{33}) of MDG minuet-trios. More precisely, the total number of minuet-trios that the rules of the *Musicalische Cabala*, as we would refer to this MDG from here onward, yield is:

$$6^{44} = 17,324,272,922,341,479,351,919,144,385,642,496.$$

A *Musikalisches Würfelspiel* (German for "musical dice game" or MDG) is a system for randomly "generating" (e.g., by using a die or two dice) musical compositions from precomposed options and was quite popular throughout Western Europe in the 18th century. The earliest known MDG is Johann Philipp Kirnberger's *Der allezeit fertige Polonoisen- und Menuettencomponist (1st ed. 1757; rev. 2nd ed. 1783)* (translated from German as "The Ever-Ready Minuet and Polonaise Composer"). Other well-known composers that are to known to have composed a MDG are C.P.E. Bach (*Einfall, einen doppelten Contrapunct in der Octave von sechs Tacten zu machen, ohne die Regeln davon zu wissen (1758)*; translated from German as "A method for making six bars of double counterpoint at the octave without knowing the rules"), Abbé Maximillian Stadler (*Table pour composer des minuets et des Trios à la infinie; avec deux dez à jouer (1780)*; translated from French as "A table for composing minuets and trios to infinity, by playing with two dice"), the latter MDG being also attributed to Franz Joseph Haydn.

Probably the most famous of MDGs is *Musikalisches Würfelspiel K. 516f (1787)*. This MDG was first published by J.J. Hummel in 1793 in Berlin and was republished in 1796 by Nikolaus Simrock in Bonn (as K. 294d or K. Anh. C 30.01). Simrock attributed this work to Wolfgang Amadeus Mozart. It is also known under the title of *Anleitung zum Componieren von Walzern so viele man will vermittelst zweier Würfel, ohne etwas von der Musik oder Composition zu verstehen* (German for "Instructions for the composition of as many waltzes as one desires with two dice, without understanding anything about music or composition") and may have been based on Mozart's manuscript *K. 516f*, written in 1787, consisting of numerous two-bar fragments of music, that appear to be some kind of game or system for constructing music out of two-bar fragments, but contains no instructions nor hints as to the use of dice. An online article by Hideo Noguchi offers a possible explanation for this attribution.

For this book, we generate MDG minuet-trios based on the rules given in *Musicalische Cabala*. Twenty (20) such MDG minuet-trios are given toward the latter part of this book. The scores of these generated minuet-trios were initially written using the `abc` environment of Chris Walshaw, then converted to Scalar Vector Graphics (SVG) images (with corresponding MIDIs) using `abcm2ps` and `abcmidi`, and then preprocessed with Inkscape to be included in LaTeX to produce this book.

[1] The information contained in the introduction were culled from the following online resources: Schola (1773), Wikipedia: *Musikalisches Würferspiel* (2017), `https://opus-infinity.org/`, and Mozart's Melody Machine (Peterson, 2001)

2 *Musicalische Cabala*

2.1 Rules

The Rules provided in *Musicalische Cabala* generate minuet-trios consisting of 44 bars/measures that may be divided into three main parts: a first part (Part I) of 12 bars and two additional parts (Parts II and III) of 16 bars each. Each of Parts II and III are composed of an eight-bar minuet and an eight-bar trio. Each part or sub-part is played with a repeat. All told, a total of $88 \times 2 = 44$ bars of music is expected to be played for each *Musicalische Cabala* minuet-trio. Parts I and II are composed for three instruments: a transverse flute, a violin, and a cello, while Part III is composed for a clavier (or harpsichord).

The notes for each bar of the minuet are determined by rolling an ordinary six-sided die 44 times to get a sequence of integers whose terms are elements of the set {1, 2, 3, ,4, 5, 6}. The first 12 toss outcomes will be used to create the eight bars of Part I of the minuet-trio, the next 16 tosses for Part II (eight tosses each for the minuet and trio), and the last 16 tosses for Part III (eight tosses for the minuet, likewise for the trio). The notes for each measure are then obtained by consulting the Cabalas (inserts between pages 4 and 5; pages 7 (Part I), 9 (Part II), and 11 (Part III) of the PDF) *Musicalische Cabala*. The bar numbers corresponding to dice roll outcomes from these three Cabalas are summarized in Table 1 below.

I – For Flute, Violin, and Cello

	Part I (12 bars)											
1	269	279	274	6	10	5	272	276	12	3	270	2
2	257	268	267	22	21	20	261	264	25	19	259	18
3	227	238	232	126	125	132	235	230	127	129	233	128
4	123	134	133	237	231	236	124	130	234	229	131	228
5	13	17	14	278	262	266	16	23	260	265	24	258
6	1	11	7	263	273	277	9	4	271	275	8	280

II – For Flute, Violin, and Cello

	Part II – Minuet (8bars)								Part II – Trio (8 bars)							
1	161	165	168	79	167	163	158	75	211	173	218	214	217	213	174	170
2	153	157	160	89	159	155	166	84	203	178	210	206	209	205	180	179
3	145	152	149	96	148	150	92	91	195	189	202	198	200	197	190	186
4	90	97	94	151	93	95	147	146	185	199	192	188	191	187	201	196
5	81	83	87	156	86	88	85	154	177	207	183	182	184	193	208	204
6	74	82	80	164	77	76	92	162	169	215	176	172	175	171	216	212

III – For Clavier

	Part III – Minuet (8 bars)								Part III – Trio (8 bars)							
1	135	139	105	102	104	101	70	100	33	37	40	246	39	244	59	34
2	143	69	111	113	110	109	30	108	41	48	44	223	45	35	241	42
3	115	29	119	121	118	120	140	116	49	53	56	63	54	43	221	50
4	107	122	32	28	141	137	117	136	57	64	61	52	222	144	55	58
5	135	114	72	68	31	27	112	26	219	226	225	47	62	224	46	220
6	99	106	142	138	71	67	103	66	239	245	243	36	242	73	38	240

Table 1: Table of bar numbers (from the Cabalas) to be used to determine the particular bar (numbered 1 to 280) to be looked up from the Table of Measures (Figures 1 to 10).

To obtain the notes to be played the particular bar of each part (Parts I, II, or III) of the minuet-trio to be constructed, simply look up the notes in the Table of Measures (Figures 1 to 10) for that bar number (numbered 1 to 280) obtained from the appropriate Cabala based on the die roll outcome.
For example, if we are in the process of creating the fifth bar (Bar 5) of Part I of the minuet and the dice outcome was a 3, then we would use the notes in bar number 125 of Figure 5: `[V:1] ^de3/a/4c/4 b/a/g/f/` for the flute, `[V:2] A3/c/4e/4 d/c/B/A/` for the violin, and `[V:5] C,CDD,` for the cello.

2.2 Table of Measures

The Table of Measures for Part I, II, and III of the minuet-trios based on *Musicalische Cabala* (noted for Set 1 only; there is a Set 2 also but it is not included here) are given in Figures 1 to 10 that follow.

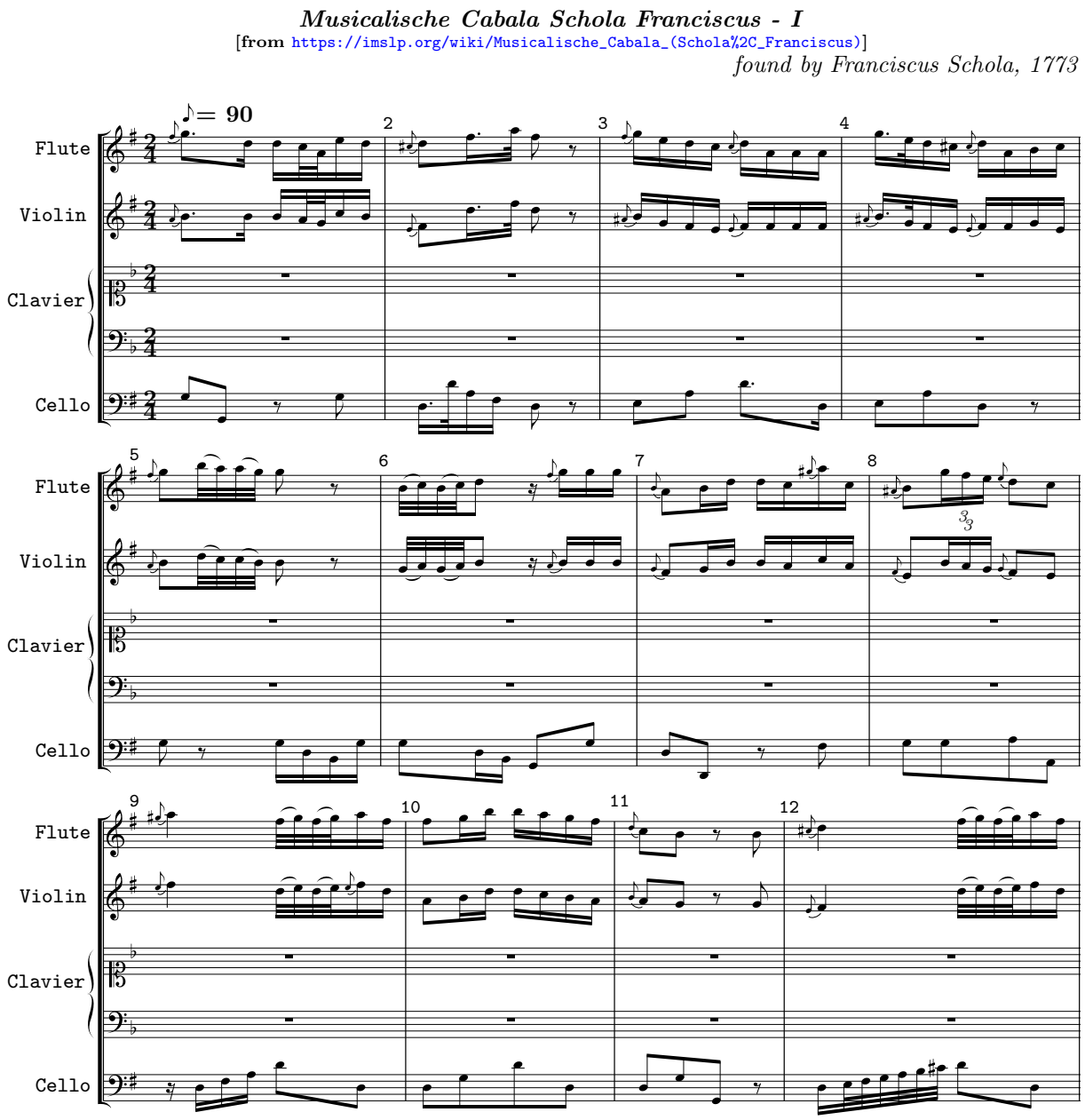


Figure 1: Table of Measures - Set 1 (Page 1/10)

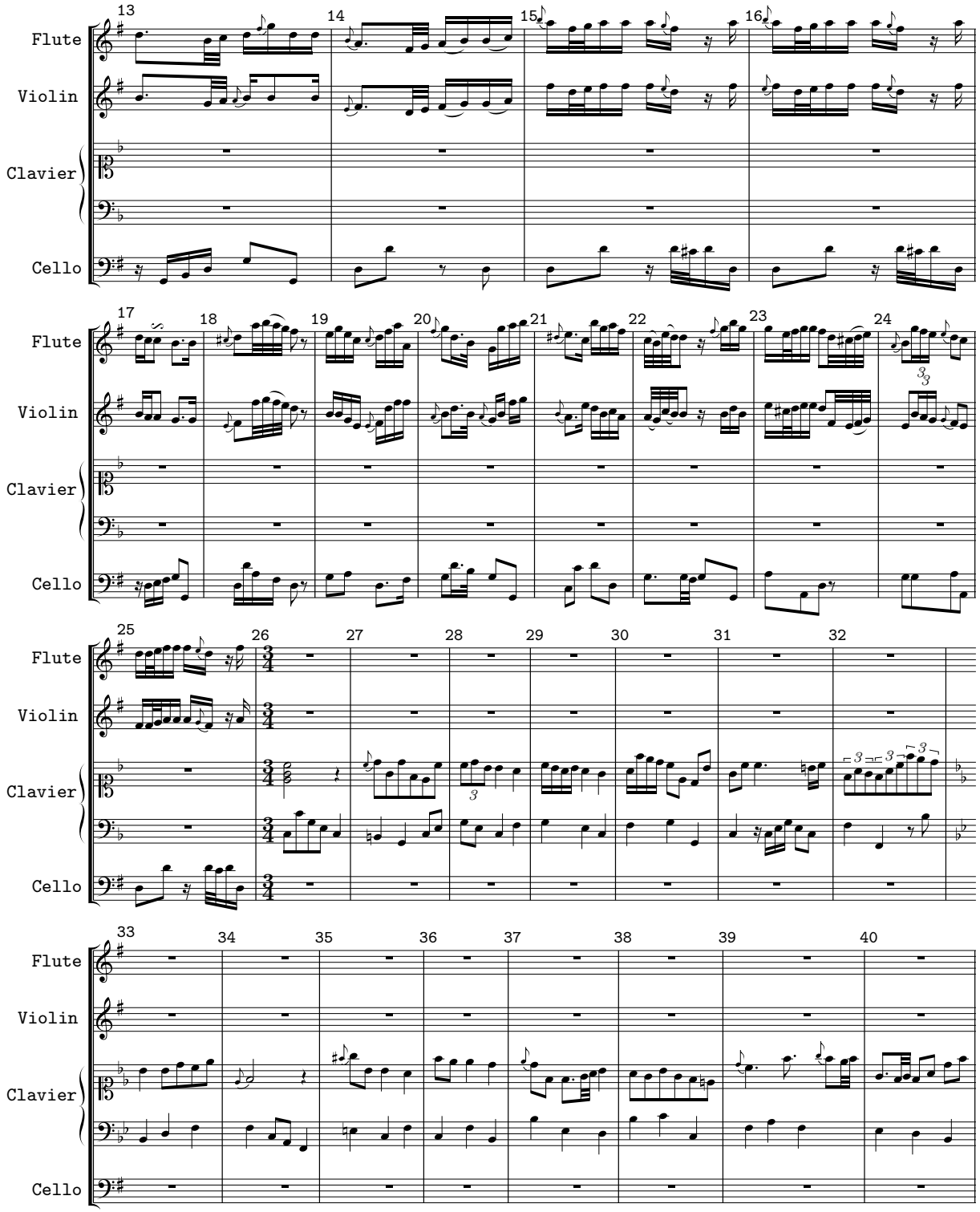


Figure 2: Table of Measures - Set 1 (Page 2/10)

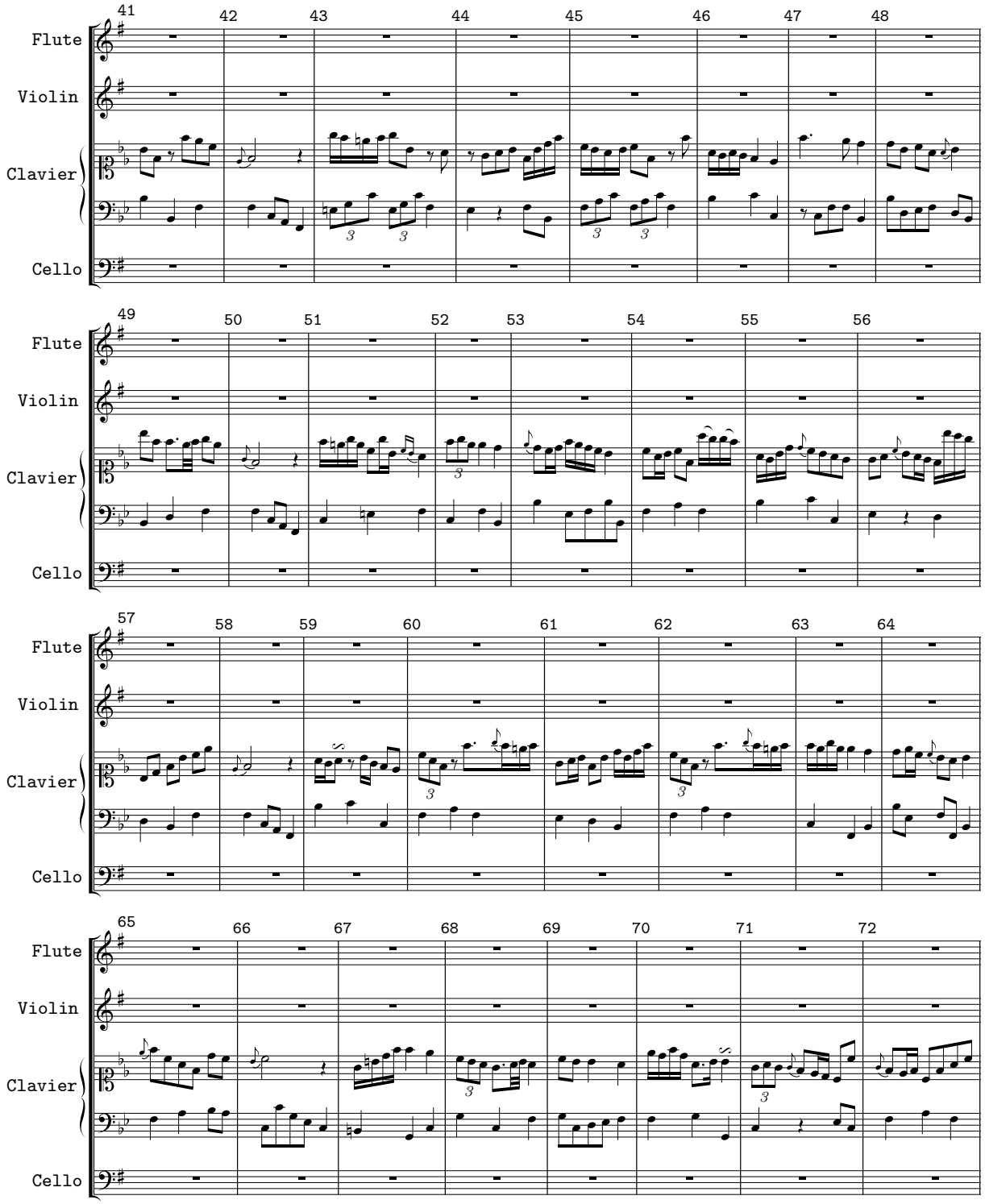


Figure 3: Table of Measures - Set 1 (Page 3/10)

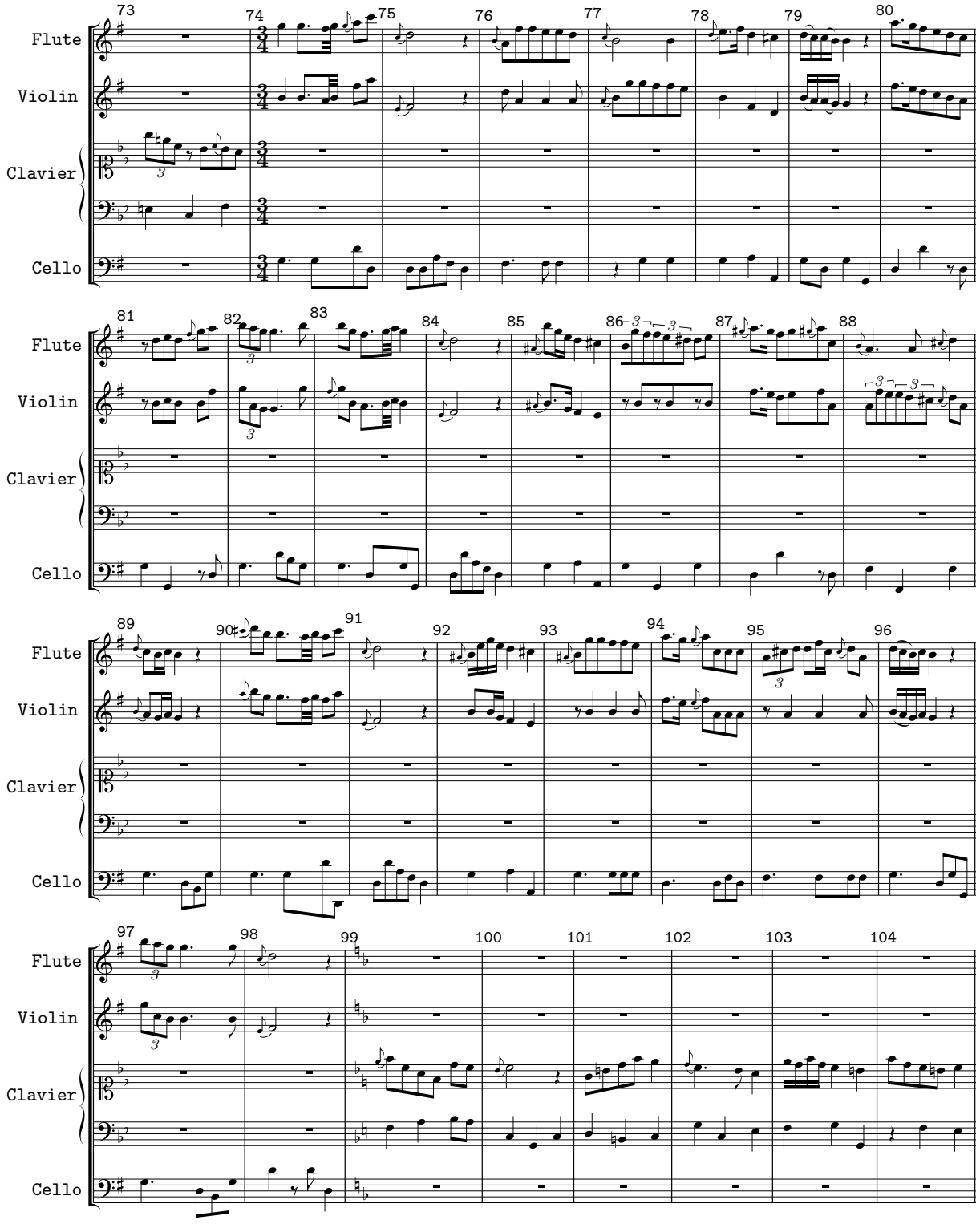


Figure 4: Table of Measures - Set 1 (Page 4/10)

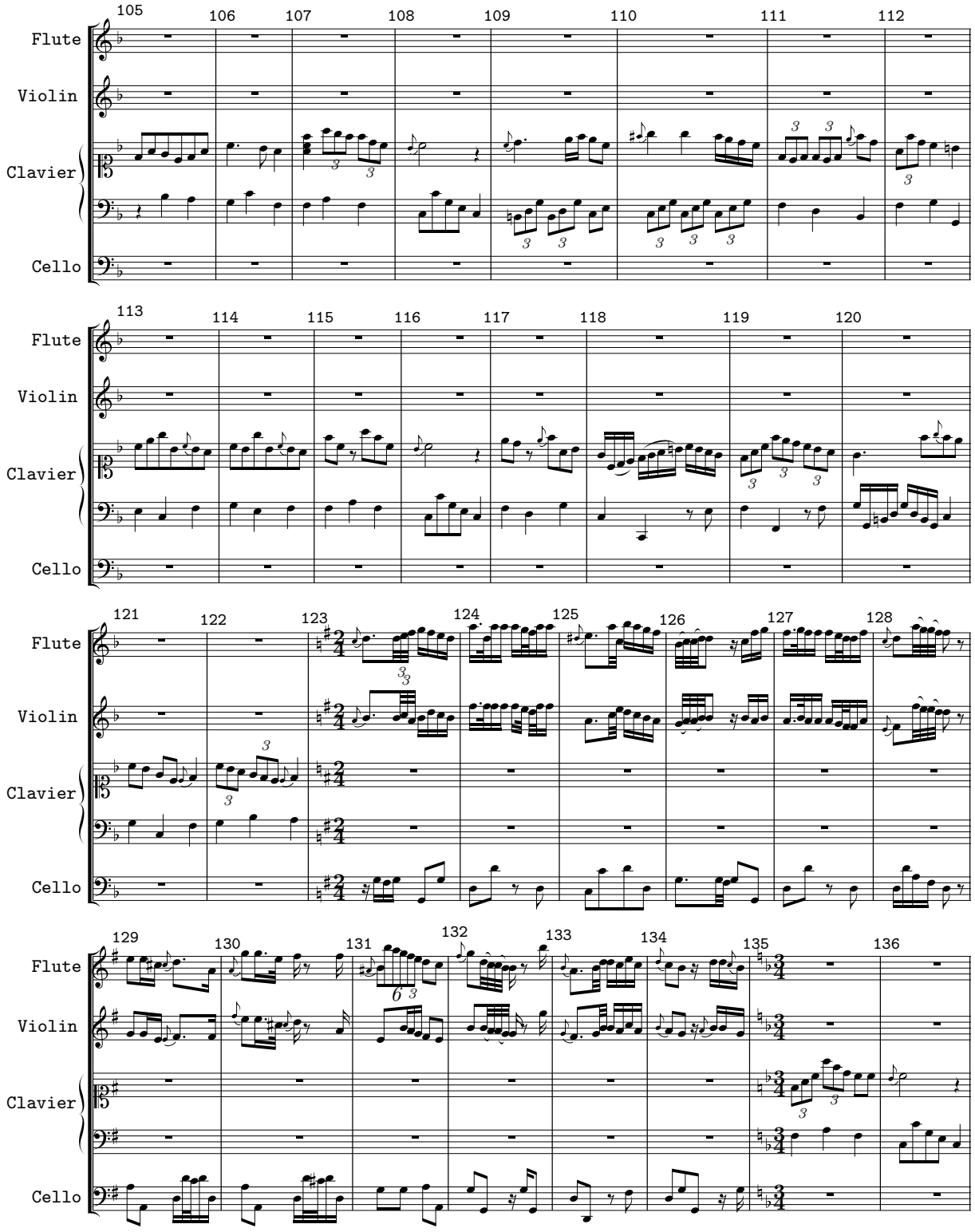


Figure 5: Table of Measures - Set 1 (Page 5/10)

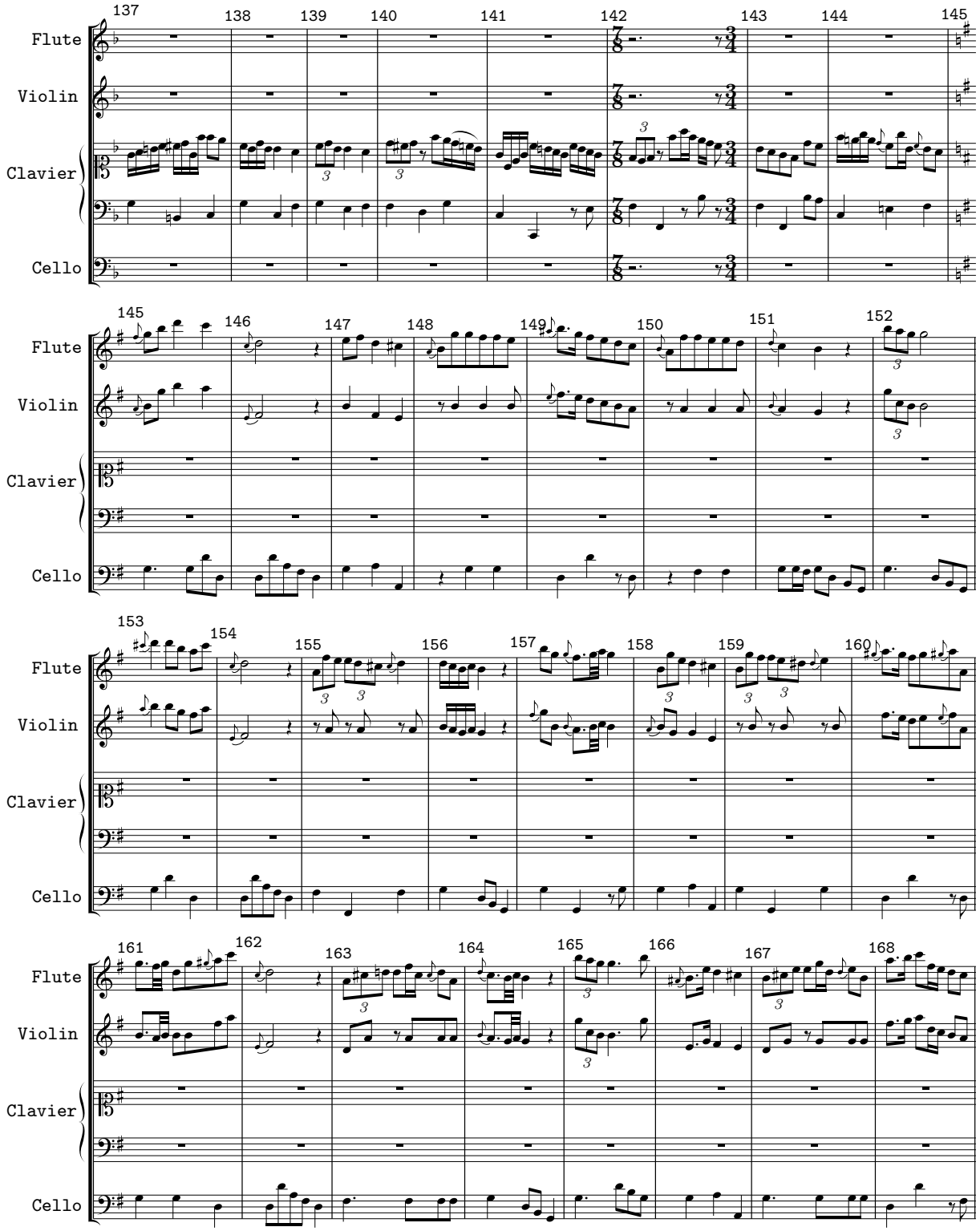


Figure 6: Table of Measures - Set 1 (Page 6/10)

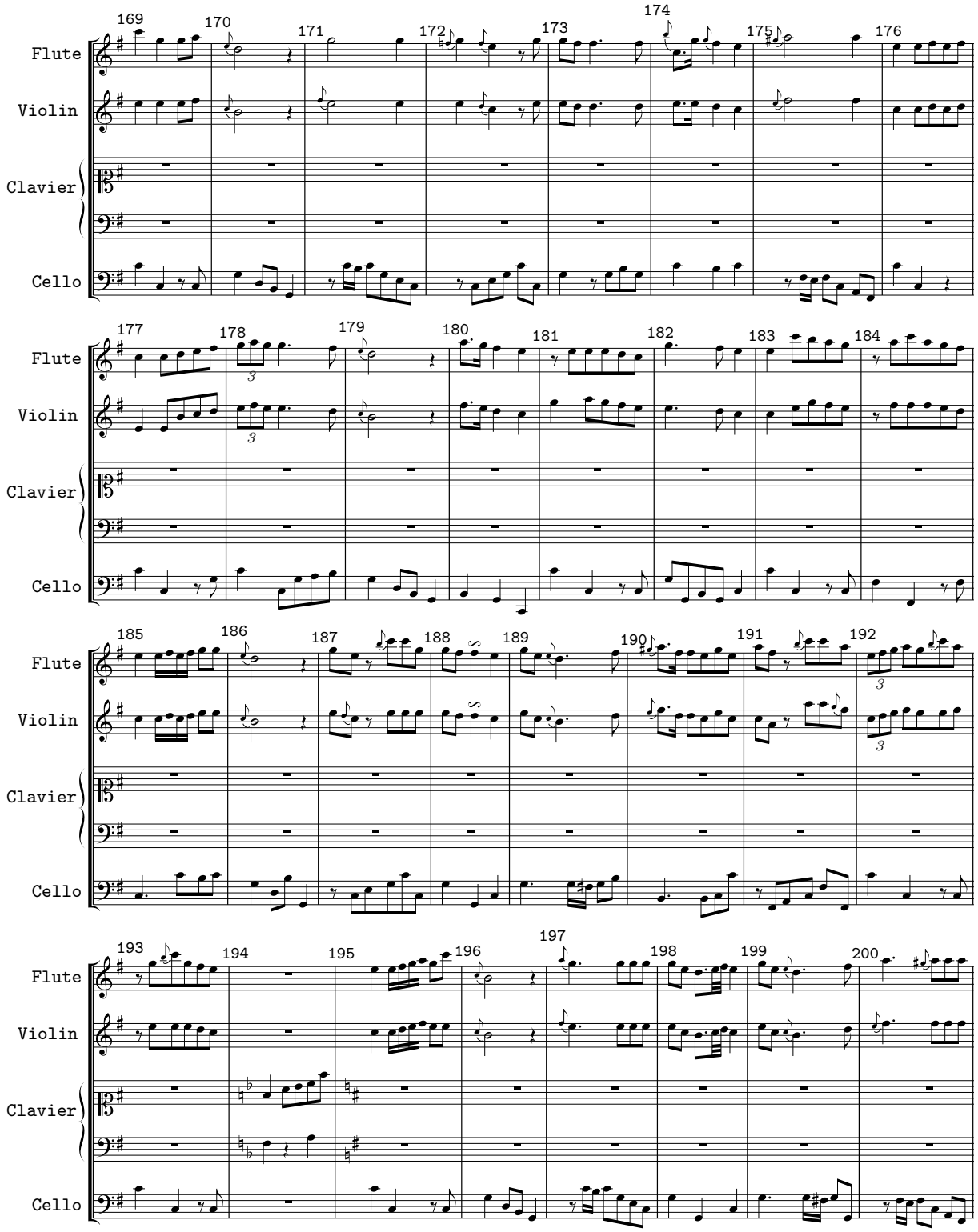


Figure 7: Table of Measures - Set 1 (Page 7/10)

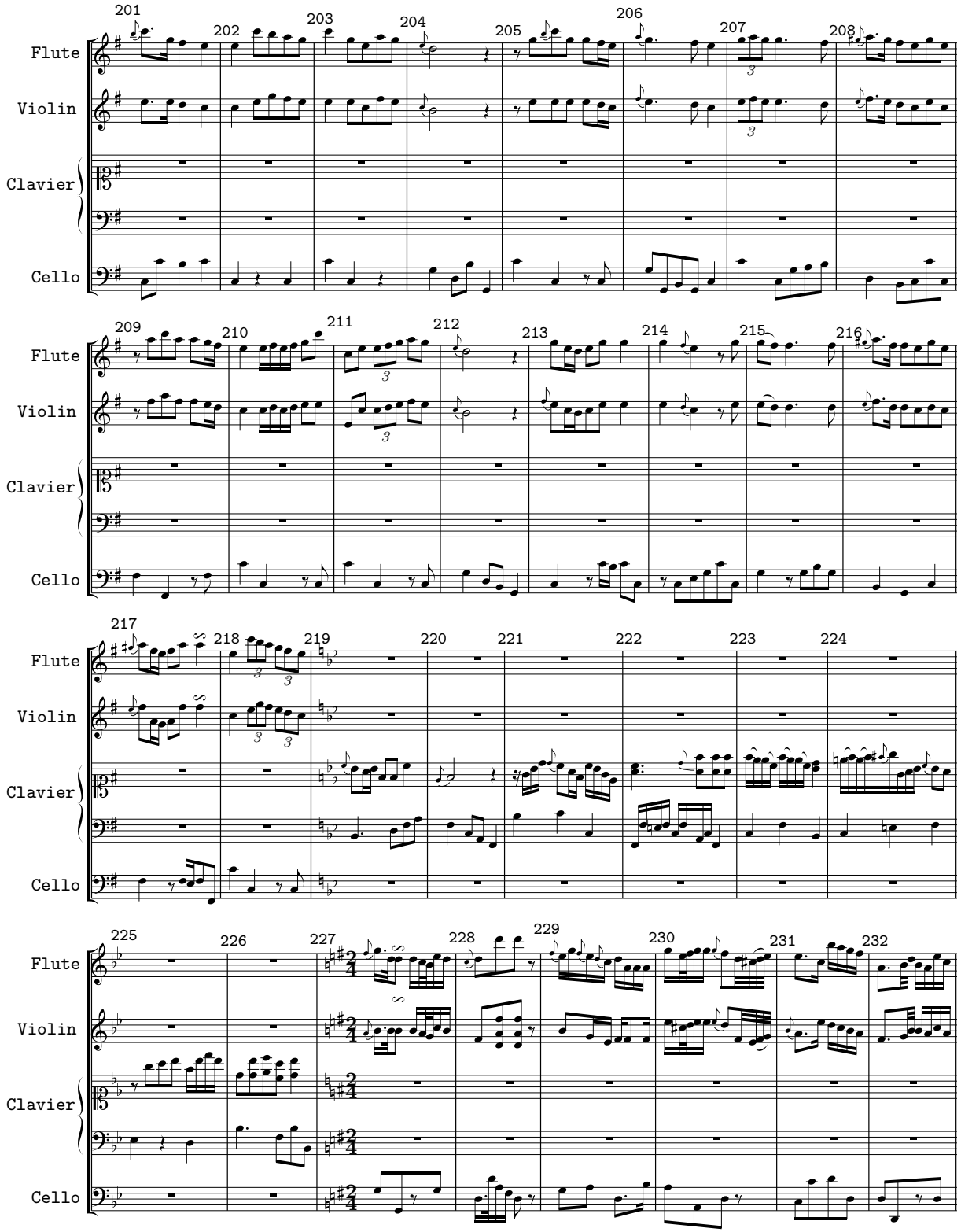


Figure 8: Table of Measures - Set I (Page 8/10)

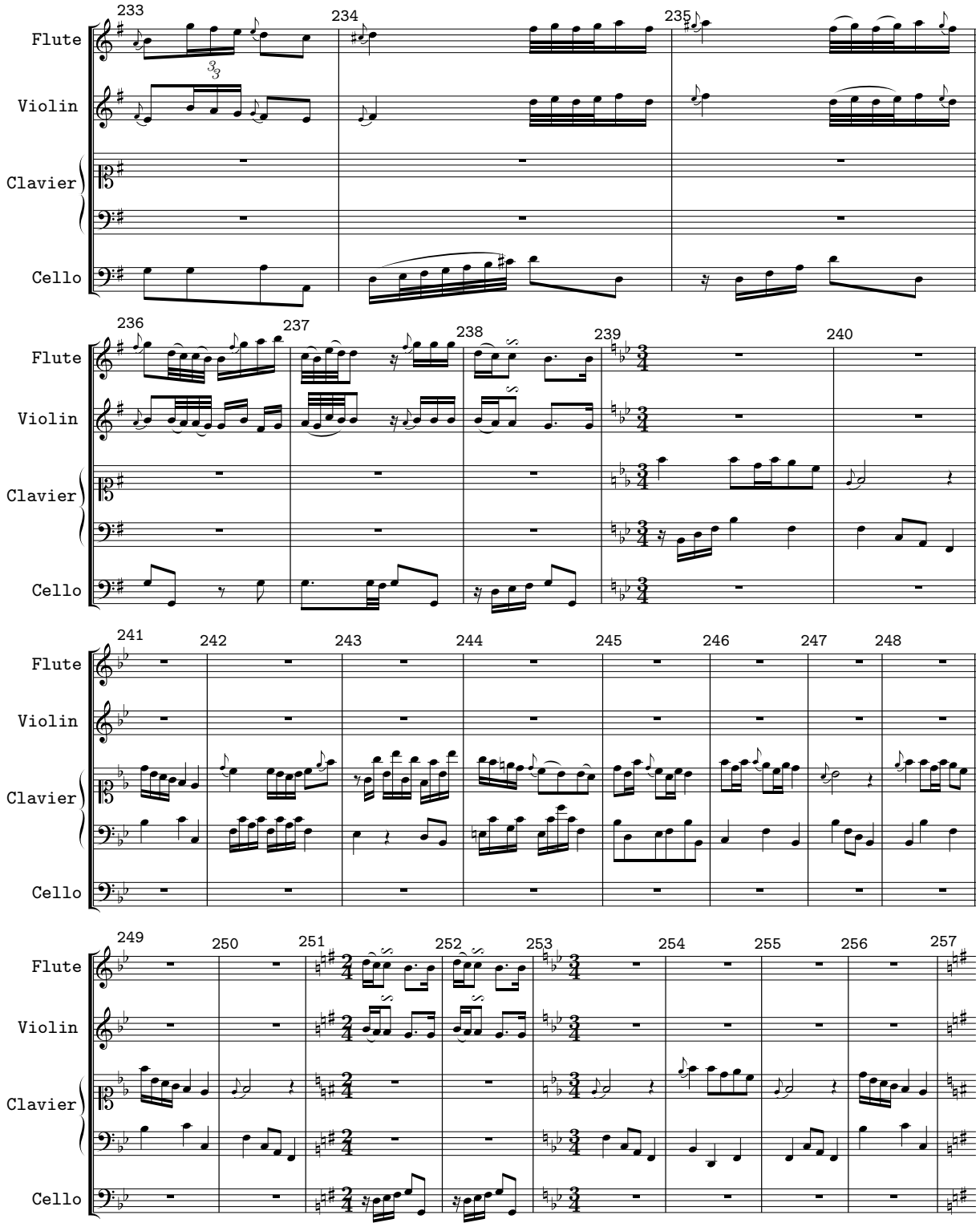


Figure 9: Table of Measures - Set 1 (Page 9/10)

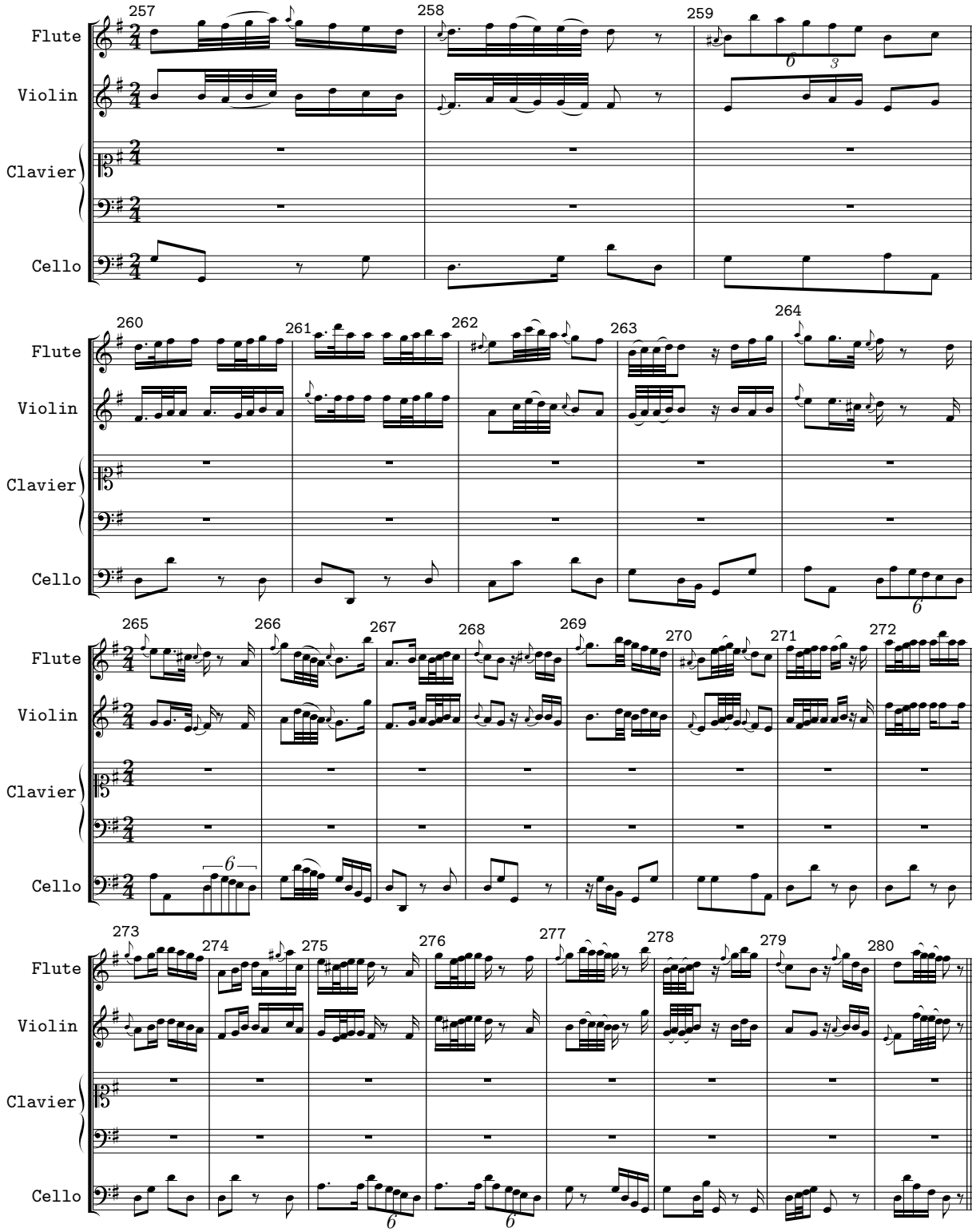


Figure 10: Table of Measures - Set I (Page 10/10)

3 Related Links

The following are very interesting sites in that they allow the online rendering of MDGs:

- Opus Infinity - Collaborative work of Robbert Harms, Hein Moors, and Suus van Petegem whose goal is to unravel the mystery behind the tables used for generating MDGs. Site visitors can generate MDGs based on works of Kirnberger, Mozart, Stadler/Haydn, Bach, Gerlach, and Callegari (*1st Cahier*). Corresponding audio files (`mid, ogg,` and/or `mp3`) and image files (`pdf` or `png`) are also made available for listening, viewing, or downloading.
- Mozart - A site maintained by John Chuang that allows the site visitor to generate MDGs based on the work of Stadler/Haydn.
- Mozart - A site maintained by Marian Aldenhövel allows the visitor to generate a MDG (user-specified or randomly-generated) and the corresponding audio (`midi, wav`) and image files (`pdf, png`) based on *Musikalisches Würferspiel, K. 516f.*
- `mozart.zip` - This is a Windows software (© 1995 VisionSoft) by John Chuang and Stephen Goodwin that generates MDG based on input from user and is available for *free* from Amaranth Publishing.
- "Mozart - Musical Game in C K. 516f," Mozart Studies Online - The site of Hideo Noguchi that offers an explanation linking *Musikalisches Würferspiel, K. 516f*, and *K. 294d (K. Anh. C 30.01)*.

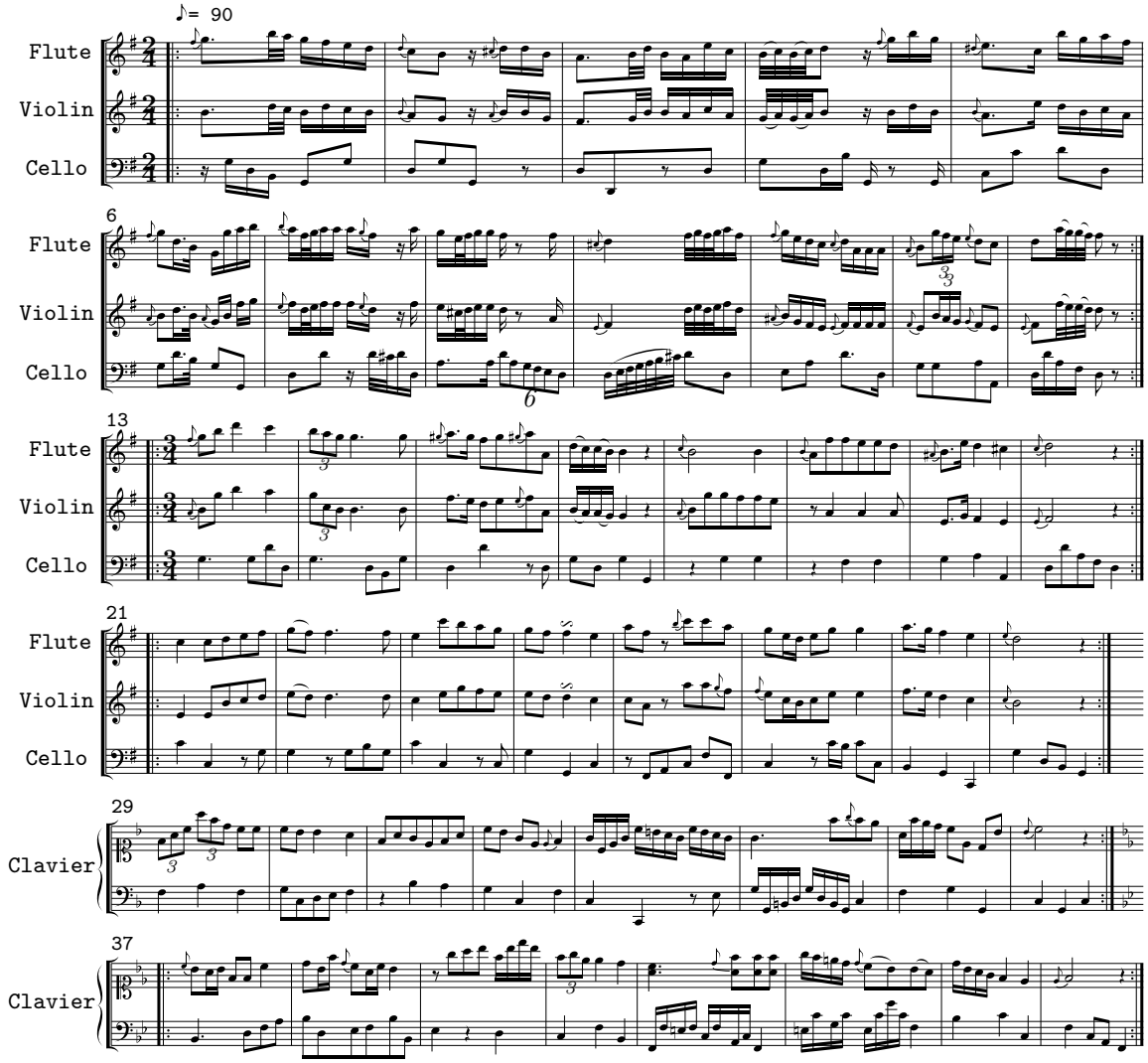
4 Acknowledgments

Special thanks to International Music Score Library Project for *Musicalische Cabala, ou Le Jeu de Dez Harmonique, 2nd ed. (1759)*, Opus Infinity for additional related information, and Amaranth Publishing for a copy of `mozart.zip`. My sincerest gratitude to Chris Walshaw et al. for the ABC music notation; Jean-Francois Moine for `abcm2ps` and the accompanying examples, templates, and pointers for the appropriate use of these resources; Guido Gonzato for the ABC Plus Project and the `abcmidi` resources available there, more especially for the ABC resource book *Making Music with ABC 2*; James R. Allwright and Seymour Shlien for `abcmidi` source and binaries; Artifex, Inc. for Ghostscript v.10.00.0 (includes the `ps2pdf` converter); Inkscape v.1.2.2 for the tool for converting SVGs to PDFs for inclusion into LaTeX documents; William Schelter for Maxima v.5.47.0—used for computing the permutation number; Google Lens and Google Translate for aiding in producing the English versions of the text of *Musicalische Cabala*; Colomban Wendling et. al for Geany 2.0 IDE; and `User:Martin H` for his reply to a TeX / LaTeX Stack Exchange question on including SVGs into LaTeX documents. Thanks to Ditto to Machtelt Garrels for the book Bash Guide for Beginners, Vivek Gite for the book Linux Script Shell Tutorial, and Steve Parker for the Unix/Linux Shell Cheatsheet. John Fogarty's GitHub Site: Latex CreateSpace BookCover and Peter Wilson's reply in TeX / LaTeX Stack Exchange on designing a book cover, were sources of ideas, information, and materials for creating the book cover and title page, thanks to both of them; LibreOffice Calc for its use in the image creation of the book cover. Many thanks, too, to the Debian Project for the Debian 12 (Bookworm) GNU/Linux OS, TeXLive for providing the TeX distribution, and GitHub for its generosity in providing space for the project.

5 Twenty (20) Selected Minuets based on *Musicalische Cabala*

This section contains an example of twenty (20) minuet-trios that were generated using the Rules in Section 2.1.

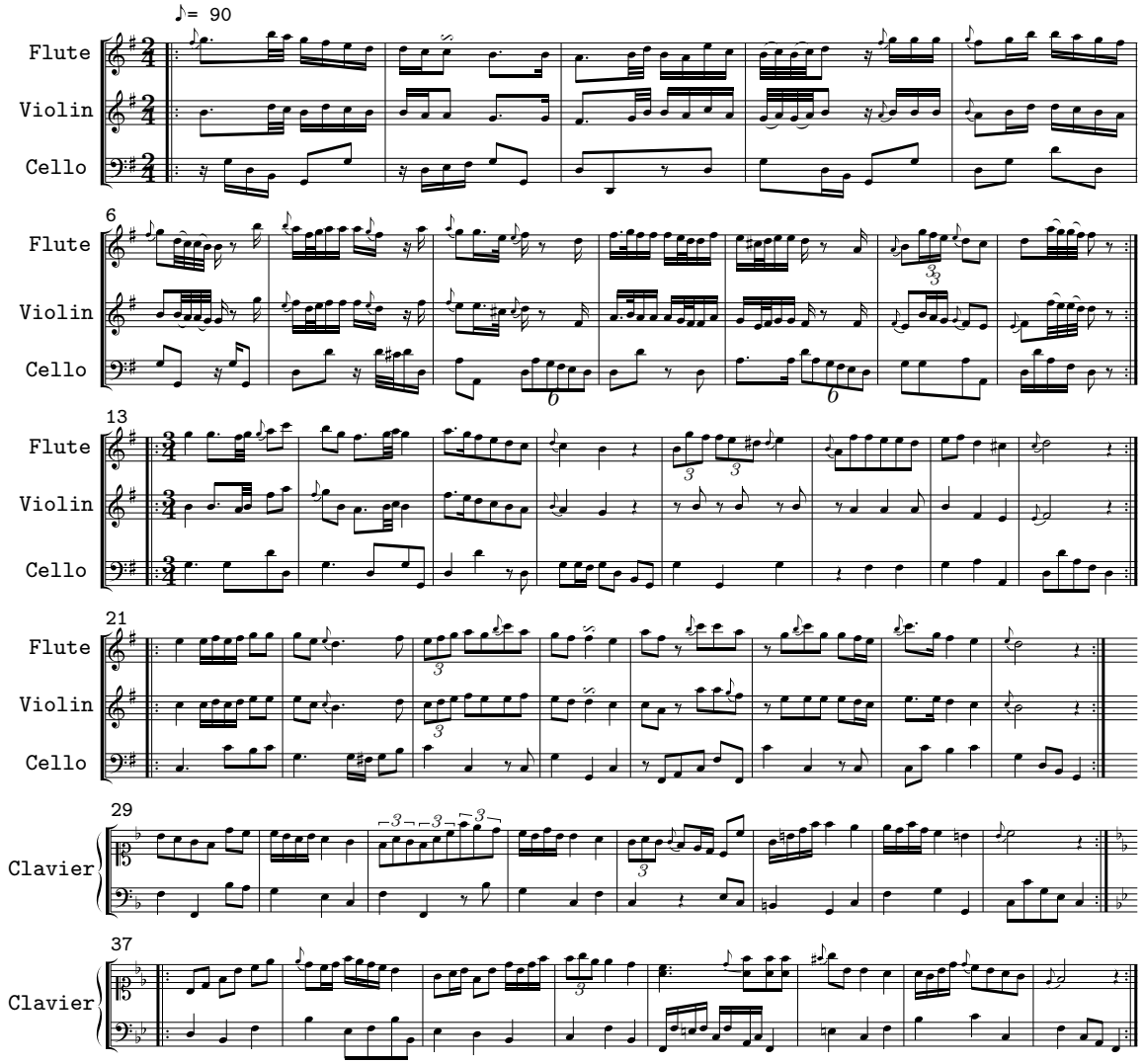
1-2-3-5-2-2-5-1-4-1-3-6-3-4-2-1-6-3-2-4-5-6-5-4-4-1-2-1-5-2-1-3-4-3-2-1-6-4-3-5-5-5-6-6
sf::269:268:232:278:21:20:16:276:234:3:233:280:
:145:97:160:79:77:150:166:146:::177:215:183:188:191:213:180:170:
:135:69:105:121:141:120:30:100:::239:64:56:47:62:224:38:240:
Perm. No.: 172272249080186827878618939909005 11



For audio (midi): sf-1-2-3-5-2-2-5-1-4-1-3-6-3-4-2-1-6-3-2-4-5-6-5-4-4-1-2-1-5-2-1-3-4-3-2-1-6-4-3-5-5-5-6-6.mid

1-5-3-1-6-3-5-2-3-6-3-6-6-5-6-4-2-3-4-2-4-3-4-4-4-2-4-2-2-3-4-6-6-6-6-4-3-1-3-3-6-5-1-4

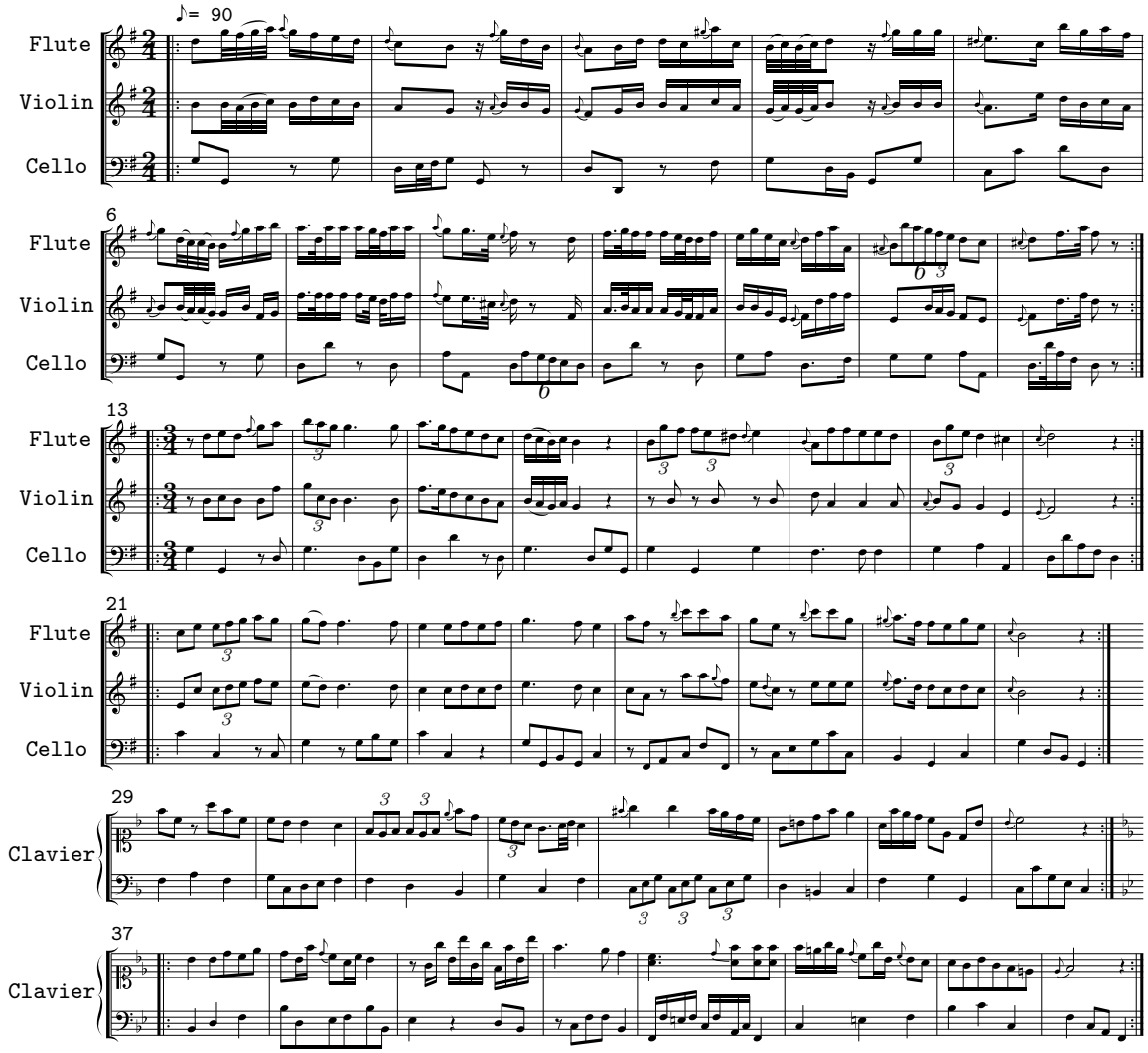
sf::269:17:232:6:273:132:16:264:127:275:233:280:
:74:83:80:151:159:150:147:84:::185:189:192:188:191:205:201:179:
:143:29:32:138:71:67:103:136:::49:37:56:63:242:224:59:58:
Perm. No.: 90550197774466343590658682921709 93



For audio (midi): sf-1-5-3-1-6-3-5-2-3-6-3-6-6-5-6-4-2-3-4-2-4-3-4-4-4-2-4-2-2-3-4-6-6-6-6-4-3-1-3-3-6-5-1-4.mid

2-1-6-1-2-4-4-2-3-2-4-1-5-4-6-3-2-6-1-3-1-6-6-5-4-4-6-4-3-2-2-5-2-1-2-3-6-1-2-6-5-1-2-1

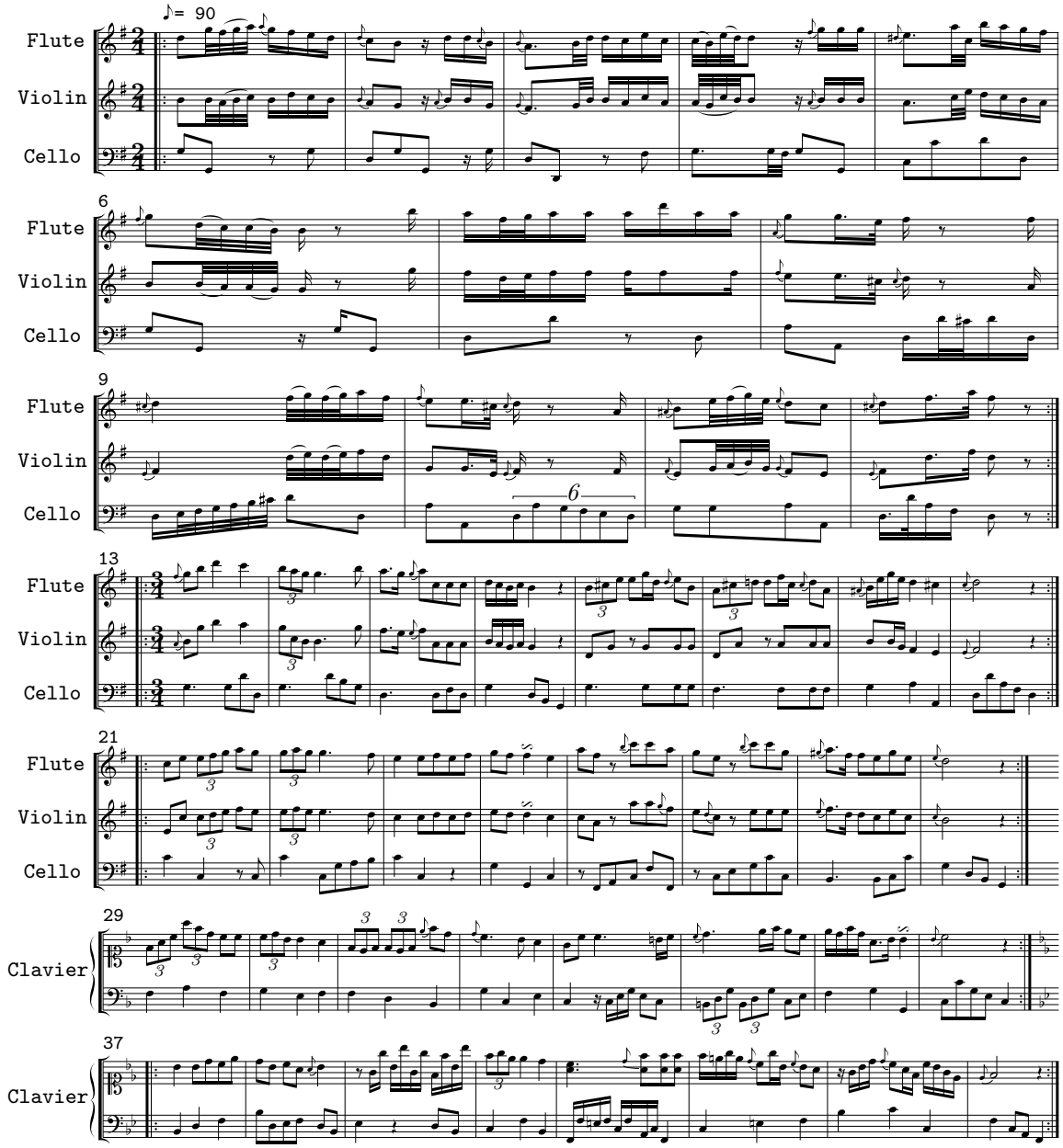
sf::257:279:7:6:21:236:124:264:127:19:131:2:
:81:97:80:96:159:76:158:91:::211:215:176:182:191:187:216:196:
:115:69:111:68:110:101:30:116:::239:37:44:36:62:244:241:34:
Perm. No.: 5462659899449201624348336880591 74



For audio (midi): sf-2-1-6-1-2-4-4-2-3-2-4-1-5-4-6-3-2-6-1-3-1-6-6-5-4-4-6-4-3-2-2-5-2-1-2-3-6-1-2-6-5-1-2-1.mid

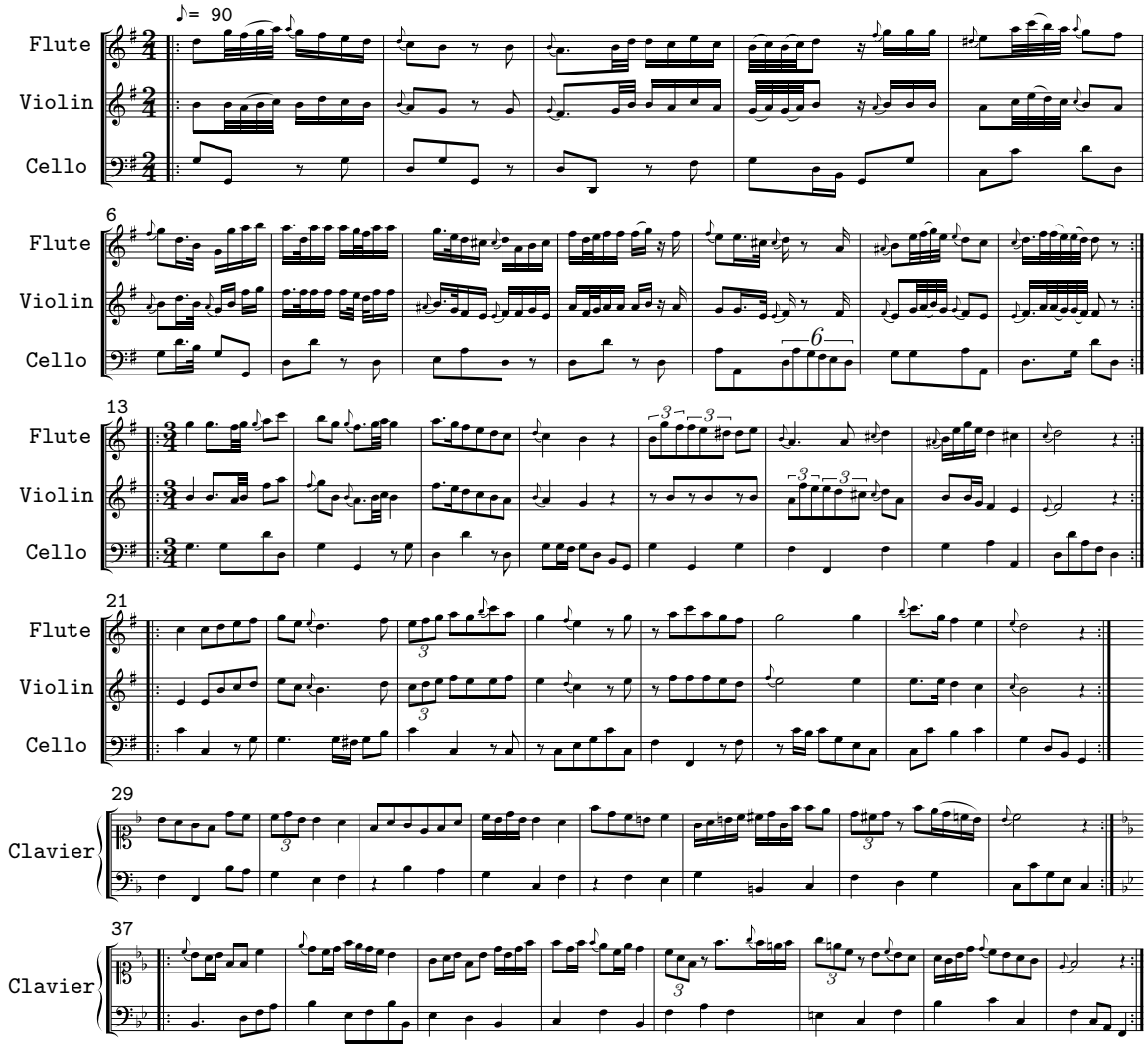
2-4-4-4-3-3-1-4-1-5-1-1-3-1-4-5-1-1-3-4-1-2-6-4-4-4-3-2-5-1-2-1-5-2-1-4-5-1-6-1-4-2-5-2

sf::257:134:133:237:125:132:272:130:12:265:270:2:
:145:165:94:156:167:163:92:146:::211:178:176:188:191:187:190:179:
:135:139:111:102:31:109:70:136:::219:37:243:246:222:35:46:42:
Perm. No.: 49345085760423753739864041064413 20



For audio (midi): sf-2-4-4-4-3-3-1-4-1-5-1-1-3-1-4-5-1-1-3-4-1-2-6-4-4-4-3-2-5-1-2-1-5-2-1-4-5-1-6-1-4-2-5-2.mid

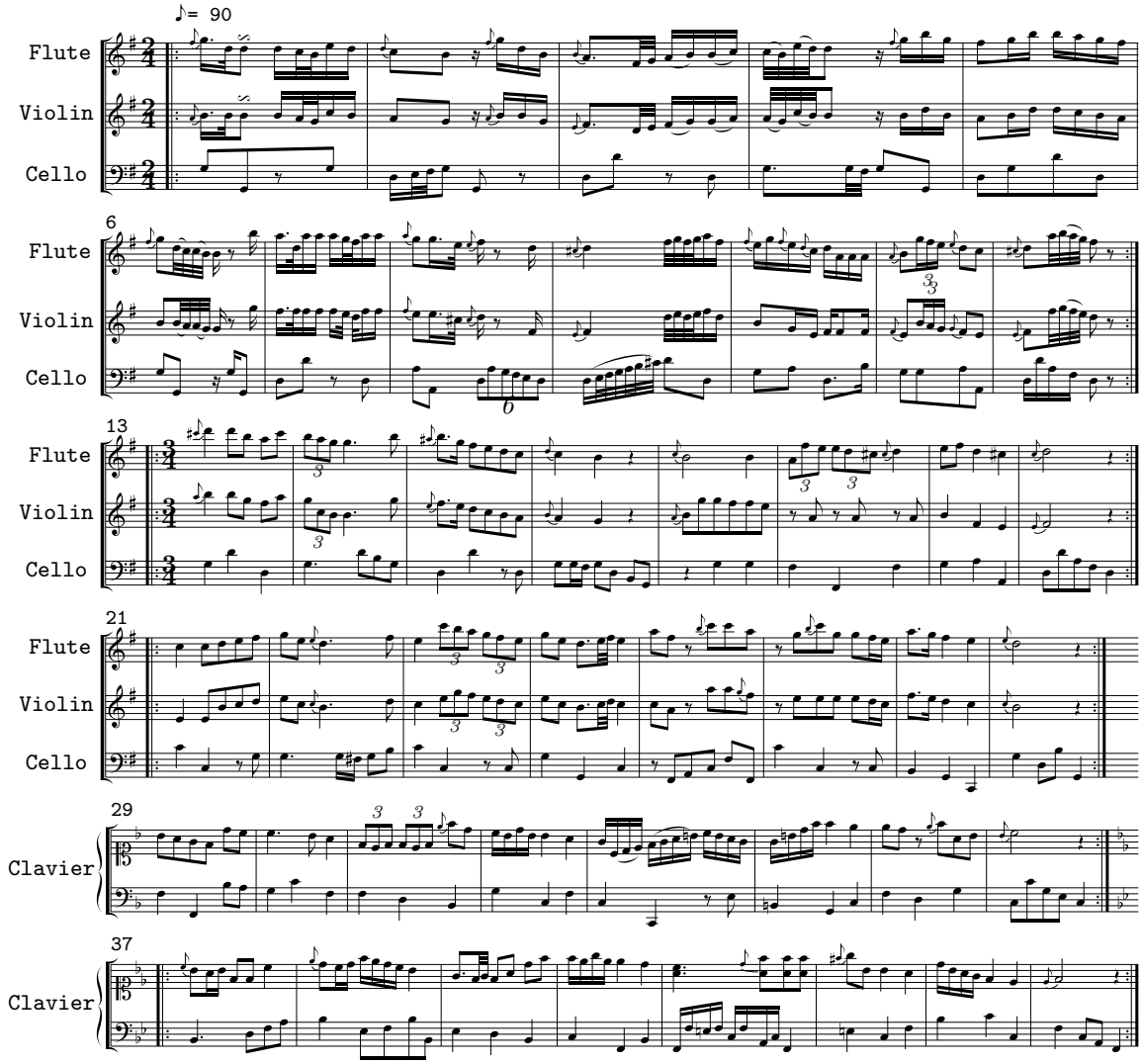
2-6-4-1-5-2-4-6-6-5-1-5-6-2-6-4-5-5-6-4-5-3-4-1-5-6-4-2-2-1-1-6-1-4-3-4-3-2-6-4-2-6-6-2
sf::257:11:133:6:262:20:124:4:271:265:270:258:
:74:157:80:151:86:88:92:146:::177:189:192:214:184:171:201:179:
:143:139:105:138:104:137:140:136:::49:48:243:52:45:73:38:42:
Perm. No.: 57165489073497670052635688244179 00



For audio (midi): sf-2-6-4-1-5-2-4-6-6-5-1-5-6-2-6-4-5-5-6-4-5-3-4-1-5-6-4-2-2-1-1-6-1-4-3-4-3-2-6-4-2-6-6-2.mid

3-1-5-2-1-3-4-2-4-4-3-2-2-1-3-4-6-2-4-2-5-3-1-3-4-2-2-3-2-6-2-6-3-6-4-6-1-4-1-4-3-2-2-6

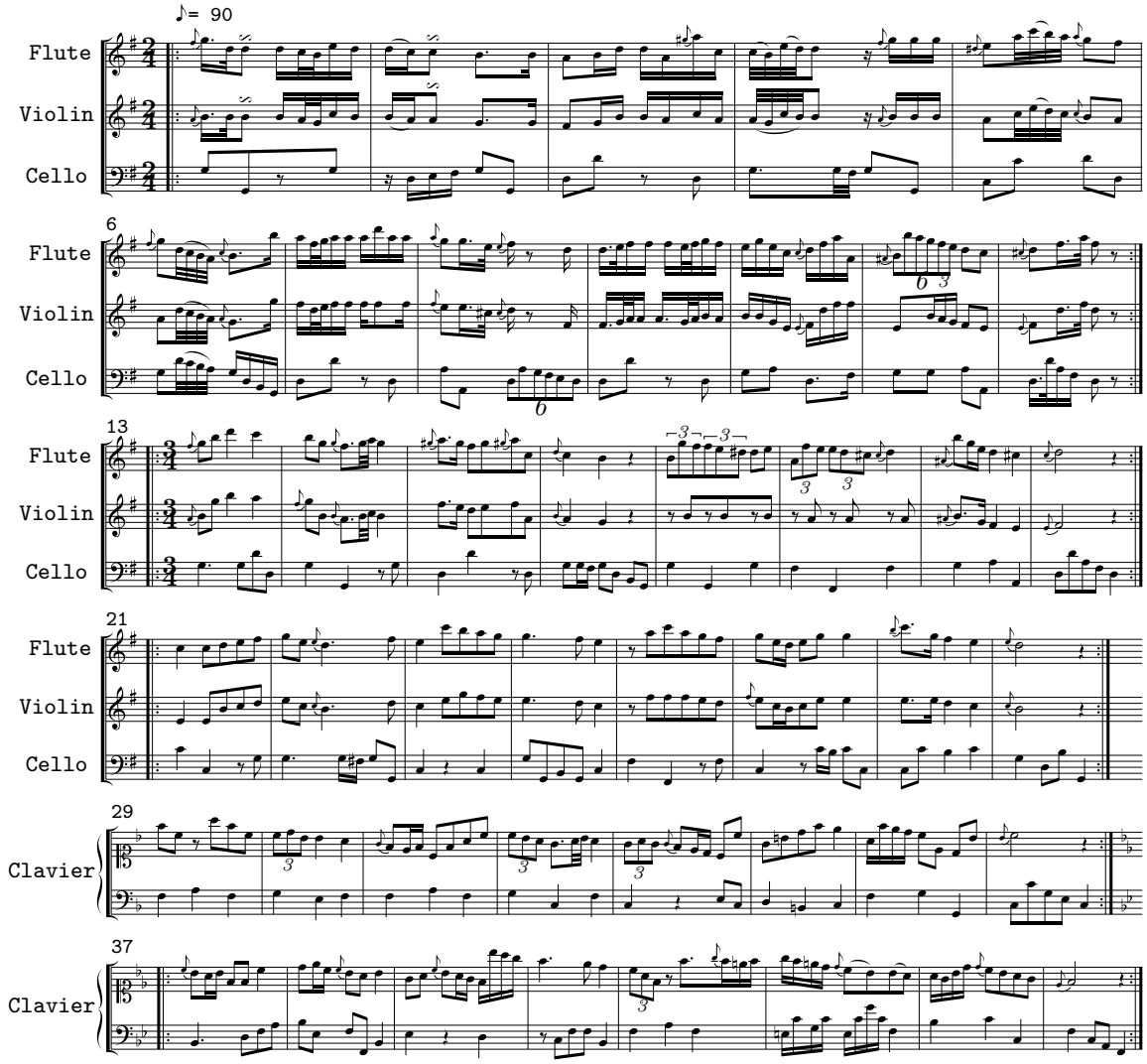
sf::227:279:14:22:10:132:124:264:234:229:233:18:
:153:165:149:151:77:155:147:84:::177:189:218:198:191:205:180:186:
:143:106:111:138:118:67:117:66:::33:64:40:52:54:35:241:240:
Perm. No.: 150319429851886284903288380871832 11



For audio (midi): sf-3-1-5-2-1-3-4-2-4-4-3-2-2-1-3-4-6-2-4-2-5-3-1-3-4-2-2-3-2-6-2-6-3-6-4-6-1-4-1-4-3-2-2-6.mid

3-3-1-4-5-5-1-2-5-2-4-1-3-2-5-4-5-2-5-6-5-4-3-5-5-1-4-3-3-1-5-5-6-1-2-6-3-3-4-6-5-2-1-6

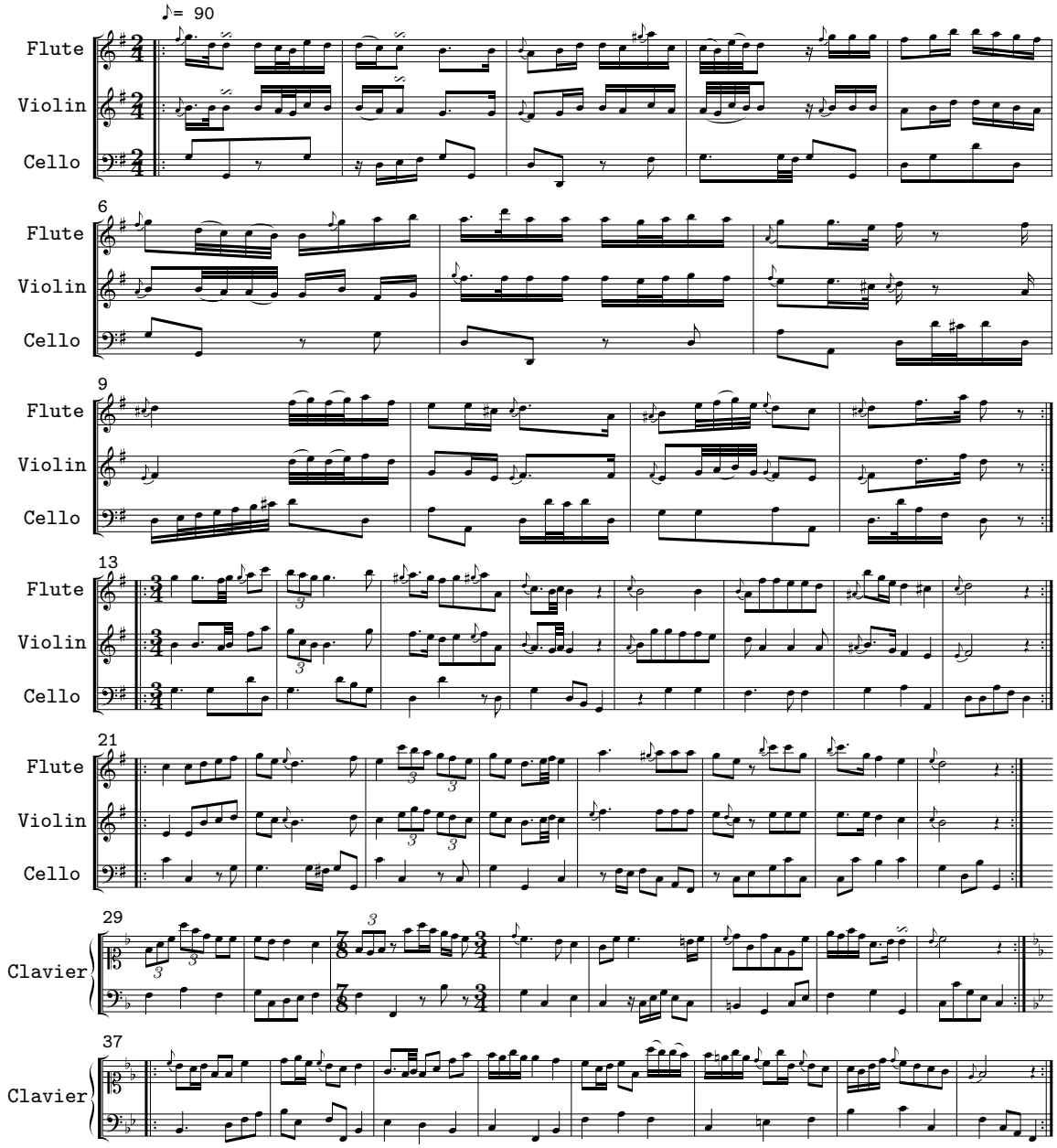
sf::227:238:274:237:262:266:272:264:260:19:131:2:
:145:157:87:151:86:155:85:162:::177:199:202:182:184:213:201:186:
:115:139:72:68:71:101:30:66:::49:53:61:36:62:35:59:240:
Perm. No.: 145829759138114928297265196428850 79



For audio (midi): sf-3-3-1-4-5-5-1-2-5-2-4-1-3-2-5-4-5-2-5-6-5-4-3-5-5-1-4-3-3-1-5-5-6-1-2-6-3-3-4-6-5-2-1-6.mid

3-3-6-4-1-4-2-4-1-3-1-1-6-1-2-6-6-6-5-1-5-4-1-3-3-4-4-3-5-2-6-1-5-5-1-2-2-6-1-1-3-1-3-2

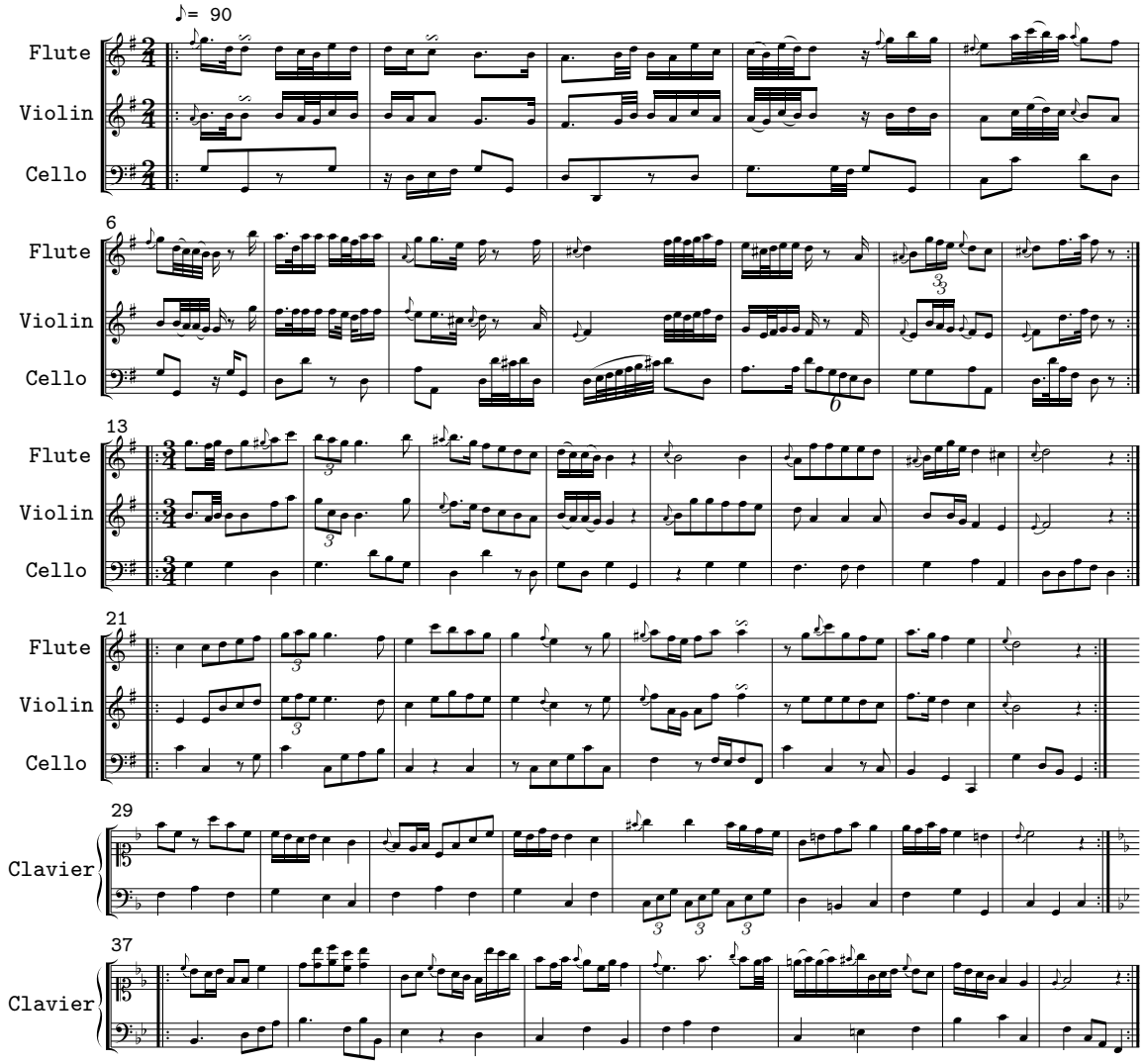
sf::227:238:7:237:10:236:261:130:12:129:270:2:
:74:165:160:164:77:76:85:75:::177:199:218:198:200:187:201:186:
:135:69:142:102:31:27:70:108:::41:245:40:246:54:244:221:42:
Perm. No.: 387689510651618108789813816128337 1



For audio (midi): sf-3-3-6-4-1-4-2-4-1-3-1-1-6-1-2-6-6-6-5-1-5-4-1-3-3-4-4-3-5-2-6-1-5-5-1-2-2-6-1-1-3-1-3-2.mid

3-5-3-2-5-3-4-4-4-6-6-1-1-1-3-1-6-6-3-1-5-5-3-1-1-5-2-6-3-3-5-6-2-1-6-1-3-3-4-3-2-1-3-1

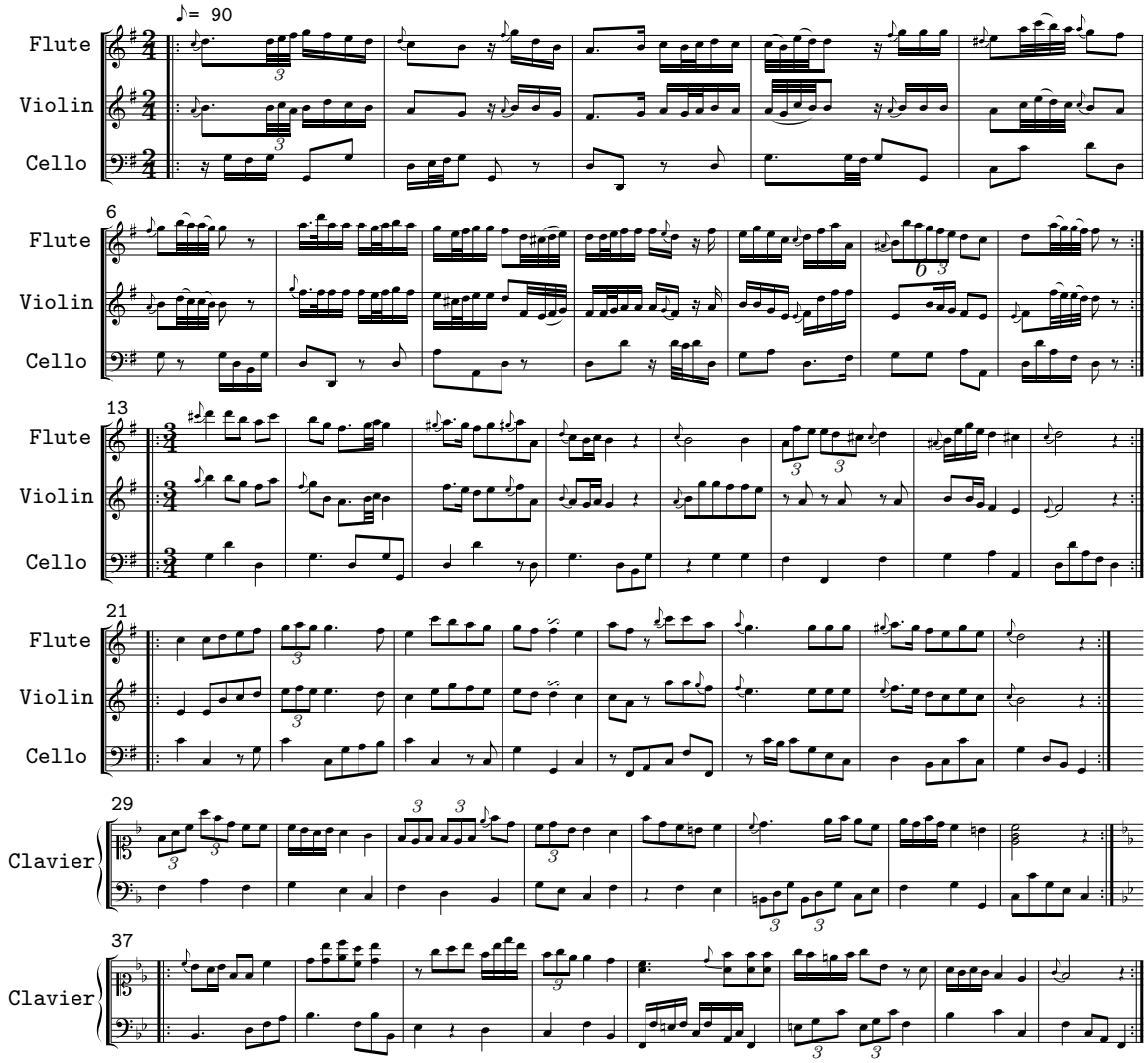
sf::227:17:232:22:262:132:124:130:234:275:8:2:
:161:165:149:79:77:76:92:75:::177:207:202:214:217:193:180:212:
:115:29:72:138:110:101:103:100:::49:53:61:63:45:244:221:34:
Perm. No.: 98154274079950582609436317330495 5



For audio (midi): sf-3-5-3-2-5-3-4-4-4-6-6-1-1-1-3-1-6-6-3-1-5-5-3-1-1-5-2-6-3-3-5-6-2-1-6-1-3-3-4-3-2-1-3-1.mid

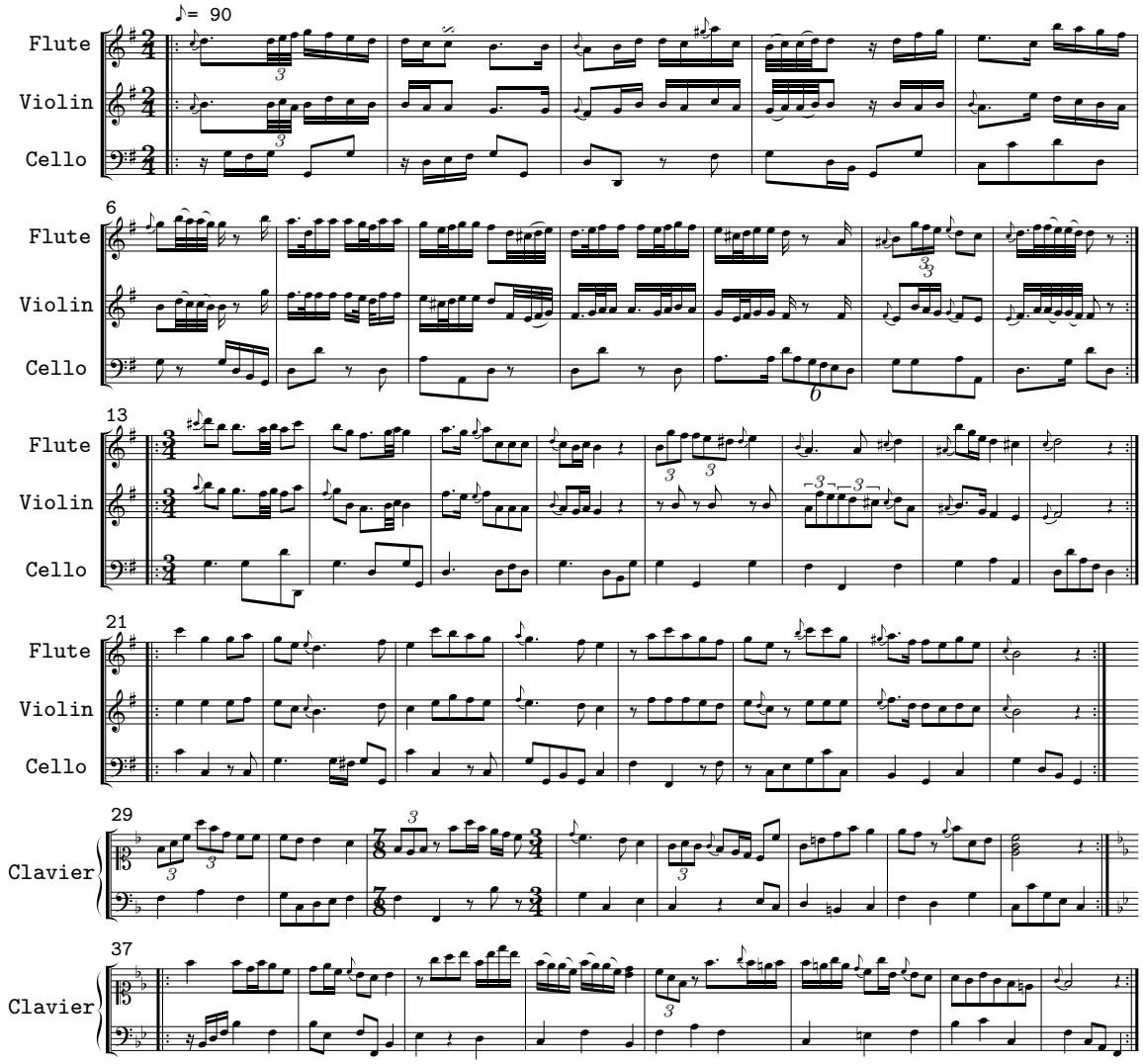
4-1-2-4-5-1-2-5-2-2-4-6-2-5-2-2-6-2-3-3-5-5-5-4-4-3-5-1-5-3-2-4-1-2-6-5-3-4-5-5-4-4-3-3

sf::123:279:267:237:262:5:261:23:25:19:131:280:
:153:83:160:89:77:155:92:91:::177:207:183:188:191:197:208:170:
:135:29:111:28:104:109:103:26:::49:64:225:47:222:144:221:50:
Perm. No.: 702854622247939005213934892900305 6



For audio (midi): sf-4-1-2-4-5-1-2-5-2-2-4-6-2-5-2-2-6-2-3-3-5-5-5-4-4-3-5-1-5-3-2-4-1-2-6-5-3-4-5-5-4-4-3-3.mid

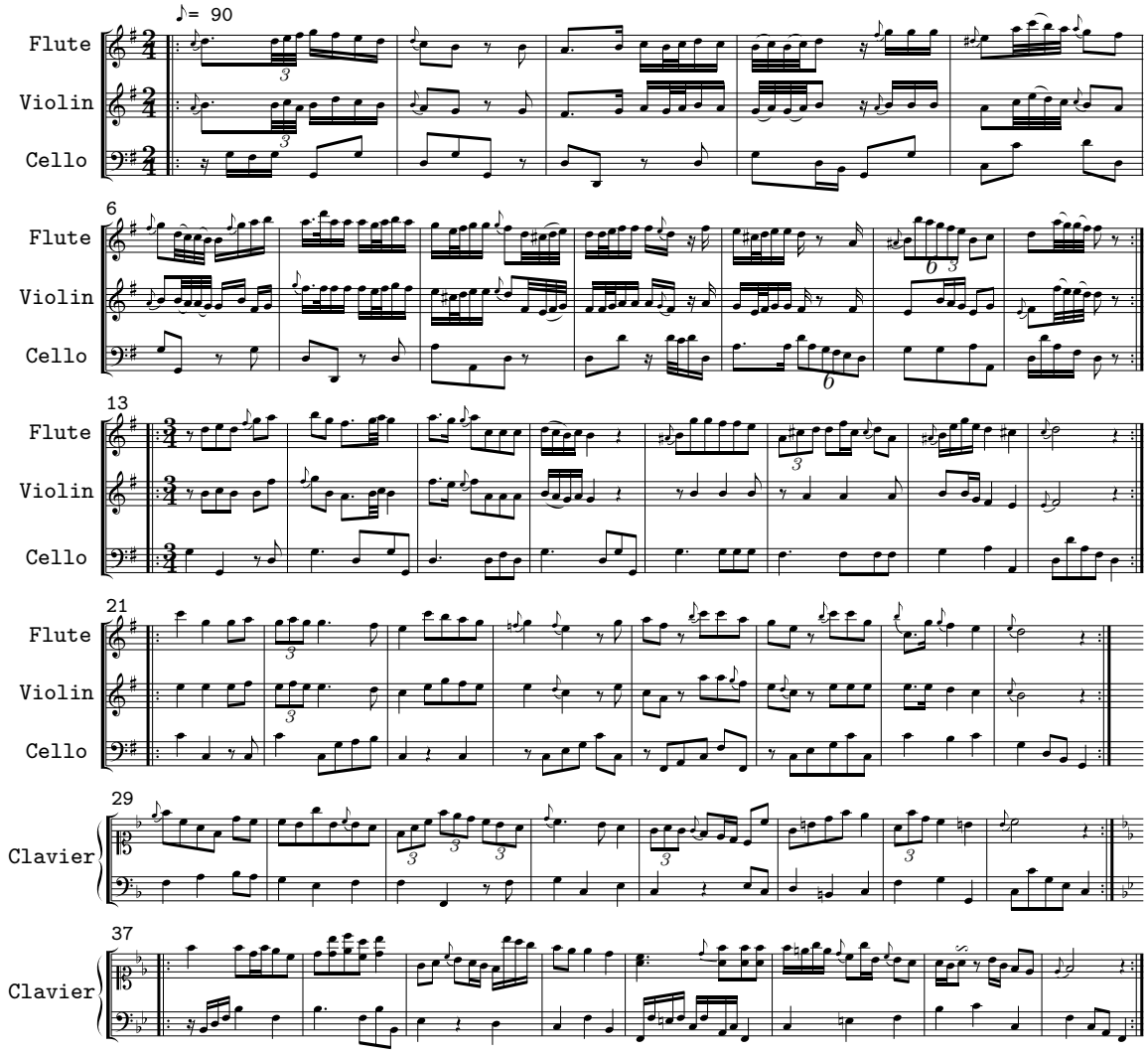
4-5-6-6-4-6-4-5-5-6-6-5-4-5-4-2-2-5-5-2-6-4-5-2-5-4-6-4-1-2-6-1-6-1-4-5-4-6-1-3-2-1-5-3
sf::123:17:7:263:231:277:124:23:260:275:8:258:
:90:83:94:89:159:88:85:84:::169:199:183:206:184:187:216:196:
:135:69:142:102:71:101:117:26:::57:245:40:63:45:244:46:50:
Perm. No.: 771784833320228135122925291358076O



For audio (midi): sf-4-5-6-6-4-6-4-5-5-6-6-5-4-5-4-2-2-5-5-2-6-4-5-2-5-4-6-4-1-2-6-1-6-1-4-5-4-6-1-3-2-1-5-3.mid

4-6-2-1-5-4-2-3-2-6-2-6-5-5-4-3-4-4-6-5-6-5-3-6-4-4-1-2-6-5-3-1-6-1-5-3-3-2-4-5-1-1-2-6

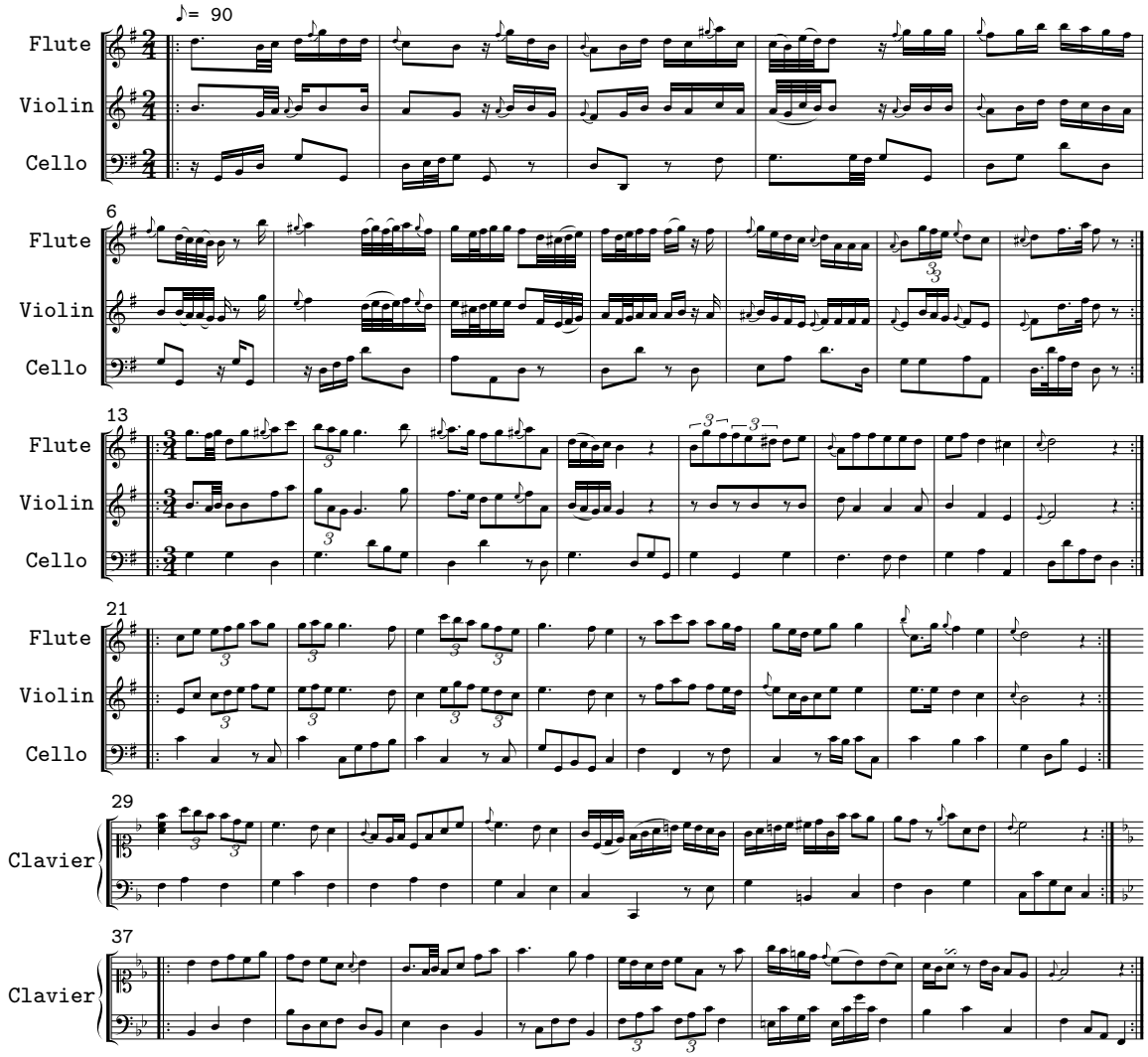
sf::123:11:267:6:262:236:261:230:25:275:259:280:
:81:83:94:96:93:95:92:154:::169:207:202:172:191:187:174:179:
:99:114:119:102:71:101:112:116:::49:48:61:47:39:244:241:240:
Perm. No.: 1492823666625559530436928114540848 6



For audio (midi): sf-4-6-2-1-5-4-2-3-2-6-2-6-5-5-4-3-4-4-6-5-6-5-3-6-4-4-1-2-6-5-3-1-6-1-5-3-3-2-4-5-1-1-2-6.mid

5-1-6-4-6-3-3-5-6-1-3-1-1-6-2-3-5-6-4-4-1-2-1-5-2-1-1-3-4-6-5-1-3-4-4-3-3-4-1-1-6-4-4-5

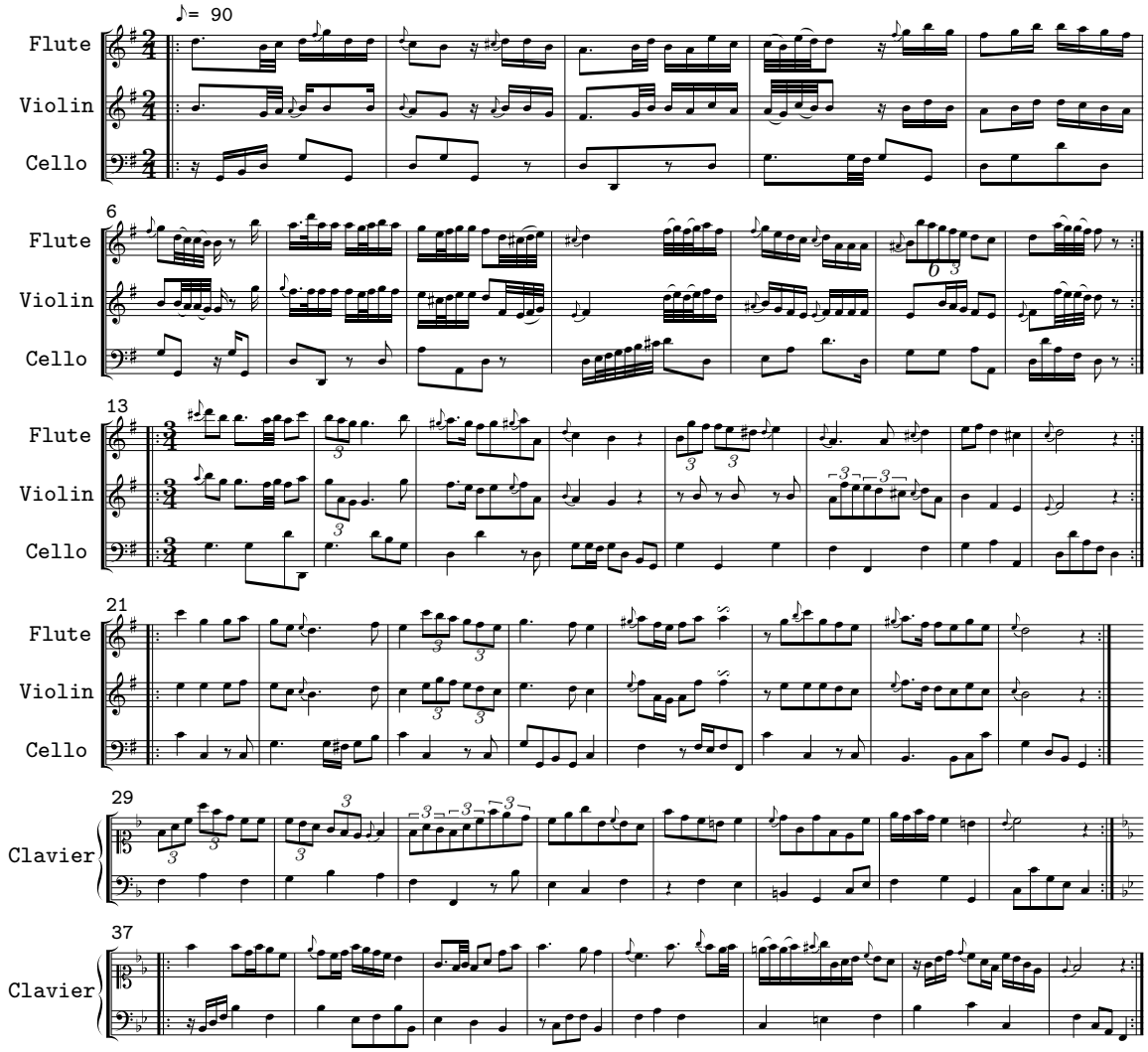
sf::13:279:7:237:273:132:235:23:271:3:233:2:
:161:82:160:96:86:76:147:146:::211:178:218:182:209:213:174:186:
:107:106:72:102:118:137:117:116:::49:64:40:246:242:144:55:220:
Perm. No.: 133008678125847084523624398981306 41



For audio (midi): sf-5-1-6-4-6-3-3-5-6-1-3-1-1-6-2-3-5-6-4-4-1-2-1-5-2-1-1-3-4-6-5-1-3-4-4-3-3-4-1-1-6-4-4-5.mid

5-2-3-2-1-3-2-5-1-1-4-6-4-6-2-4-2-5-4-3-6-3-1-5-1-5-3-2-1-4-4-2-1-5-6-4-3-6-3-6-4-1-4-2

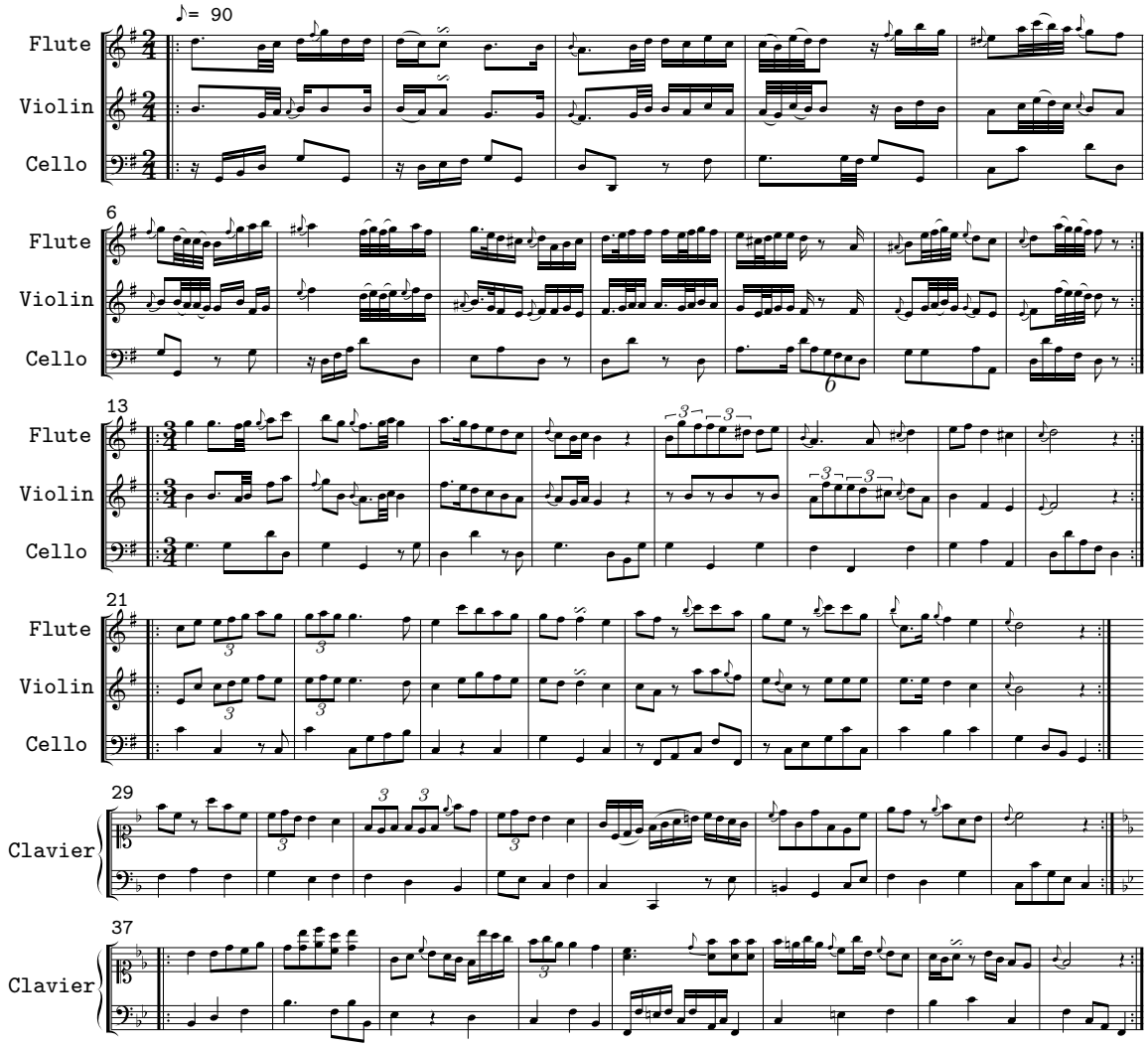
sf::13:268:232:22:10:132:261:23:12:3:131:280:
:90:82:160:151:159:88:147:91:::169:189:218:182:217:193:190:179:
:135:122:32:113:104:27:103:136:::49:245:56:36:222:244:55:42:
Perm. No.: 438338977604426334359912251116701 9



For audio (midi): sf-5-2-3-2-1-3-2-5-1-1-4-6-4-6-2-4-2-5-4-3-6-3-1-5-1-5-3-2-1-4-4-2-1-5-6-4-3-6-3-6-4-1-4-2.mid

5-3-4-2-5-4-6-6-5-6-1-3-6-2-6-2-5-5-4-5-1-5-3-4-4-4-1-6-3-1-2-4-3-5-4-2-3-1-2-6-4-1-6-3

sf::13:238:133:22:262:236:9:4:260:275:270:128:
:74:157:80:89:86:88:147:154:::211:207:202:188:191:187:174:212:
:115:139:111:28:118:27:117:108:::49:37:44:36:222:244:38:50:
Perm. No.: 8232543458062903391682051632192885

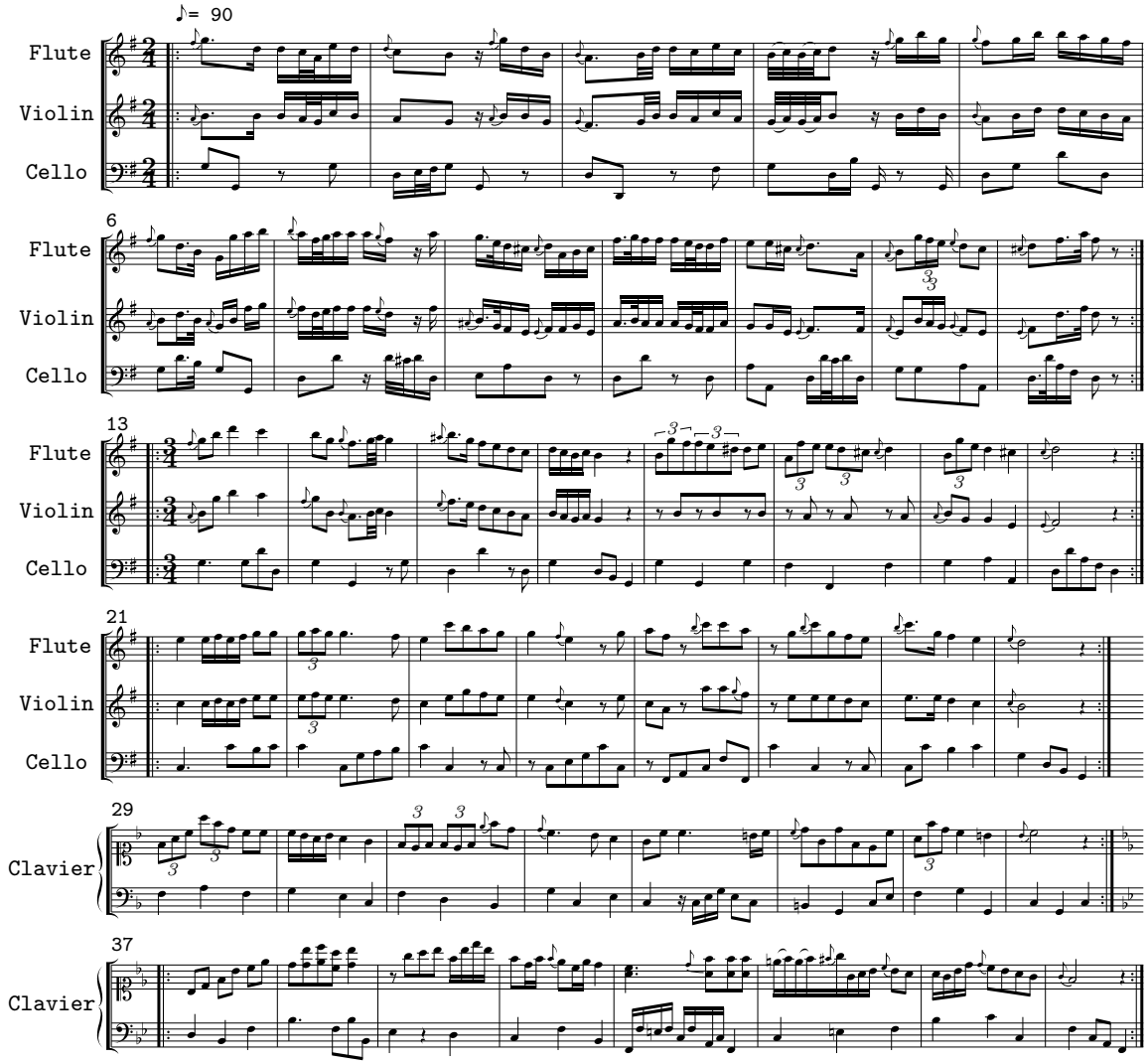


For audio (midi): sf-5-3-4-2-5-4-6-6-5-6-1-3-6-2-6-2-5-5-4-5-1-5-3-4-4-4-1-6-3-1-2-4-3-5-4-2-3-1-2-6-4-1-6-3.mid

6-1-4-5-6-2-5-6-3-3-3-1-3-2-3-5-5-2-1-4-4-5-5-1-4-5-4-6-5-3-2-1-5-5-5-1-2-6-3-4-5-3-2-3

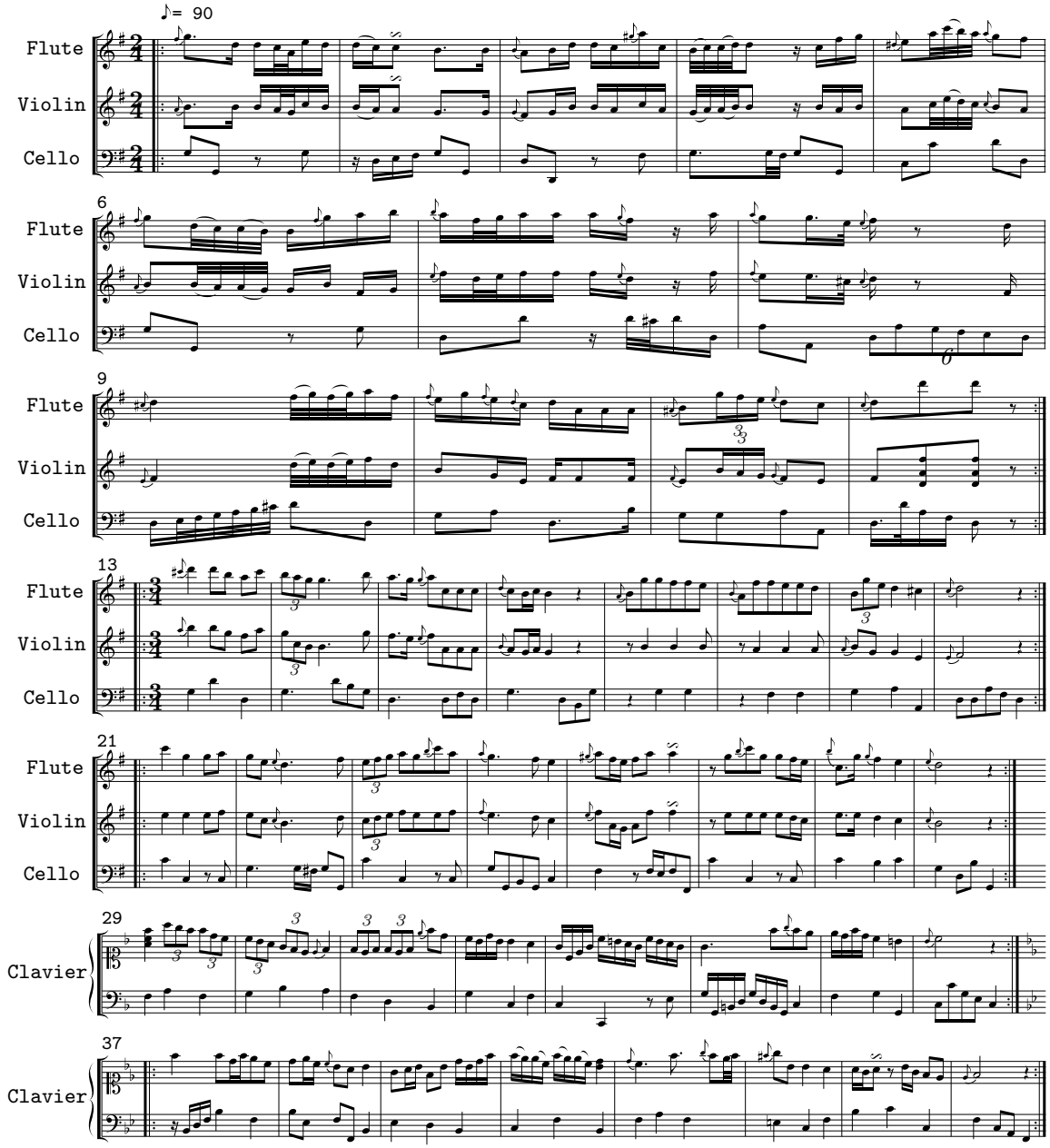
sf::1:279:133:278:273:20:16:4:127:129:233:2:
:145:157:149:156:86:155:158:146:::185:207:183:214:191:193:201:212:
:135:29:111:102:31:27:112:100:::41:245:56:52:62:43:241:50:

Perm. No.: 647761485903883134734979847064934 6



For audio (midi): sf-6-1-4-5-6-2-5-6-3-3-3-1-3-2-3-5-5-2-1-4-4-5-5-1-4-5-4-6-5-3-2-1-5-5-5-1-2-6-3-4-5-3-2-3.mid

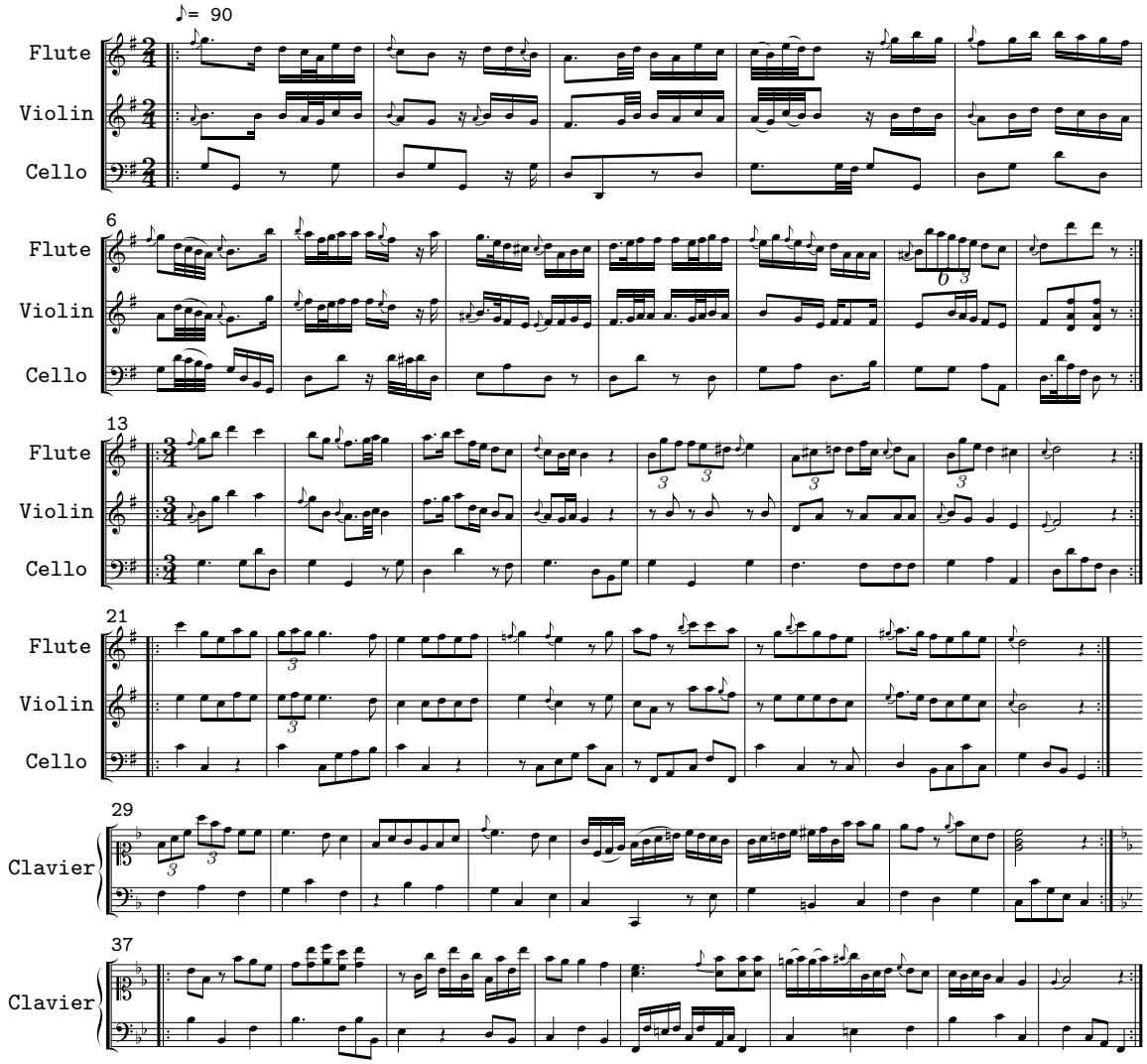
6-3-6-3-5-4-5-2-1-4-6-4-2-1-4-2-3-3-1-1-6-4-4-2-1-2-1-3-4-4-2-6-4-3-6-6-3-4-3-5-3-5-1-6
sf::1:238:7:126:262:236:16:264:12:229:8:228:
:153:165:94:89:148:150:158:75:::169:199:192:206:217:205:174:186:
:107:122:111:138:141:120:103:66:::49:64:56:47:54:224:59:240:
Perm. No.: 14794319704345769990272894837911126



For audio (midi): sf-6-3-6-3-5-4-5-2-1-4-6-4-2-1-4-2-3-3-1-1-6-4-4-2-1-2-1-3-4-4-2-6-4-3-6-6-3-4-3-5-3-5-1-6.mid

6-4-3-2-6-5-5-6-5-4-4-4-3-2-1-2-2-1-1-4-2-5-6-6-4-5-5-6-1-6-1-1-3-4-4-5-6-3-5-2-5-4-1-6

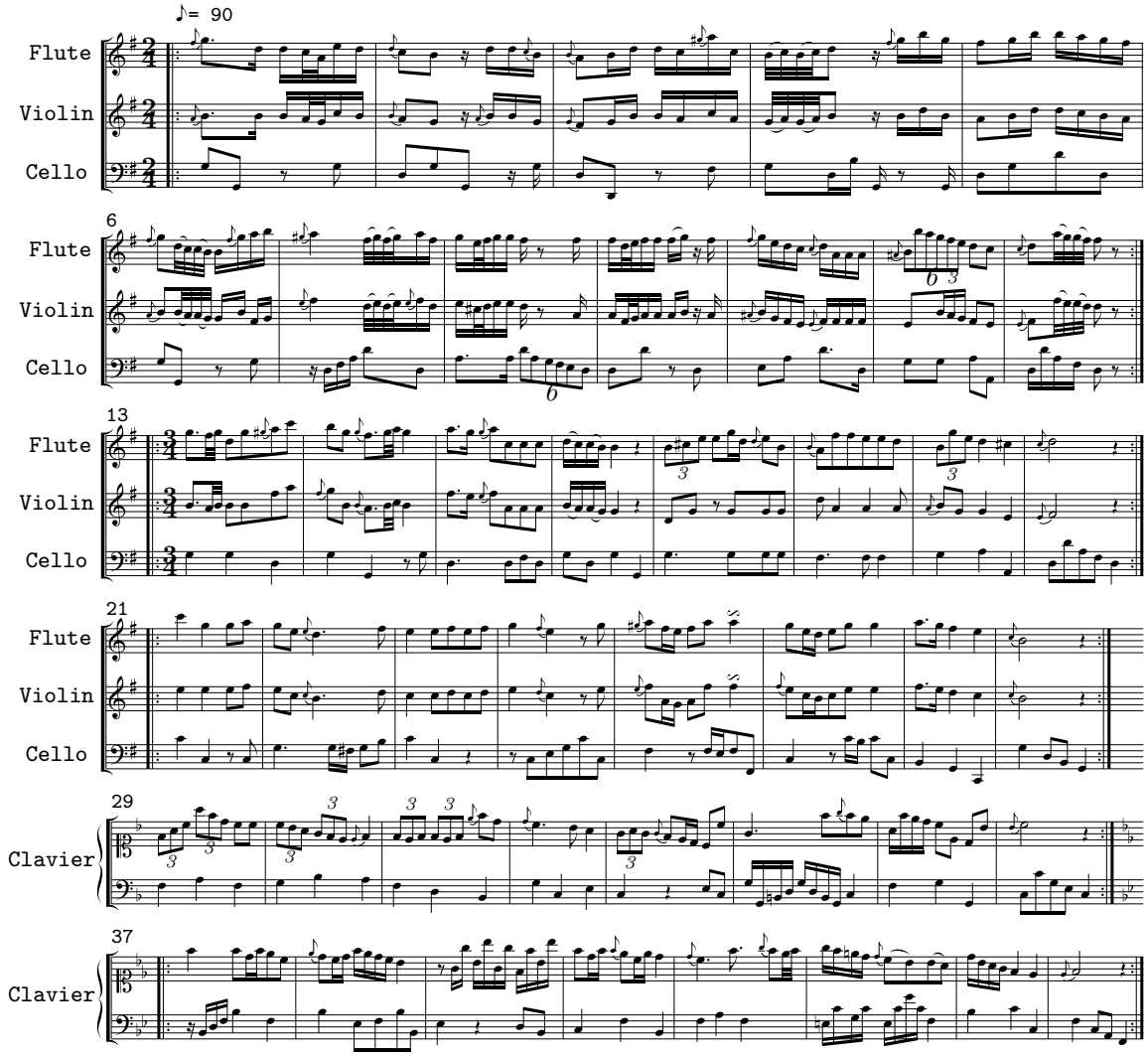
```
sf::1:134:232:22:273:266:16:4:260:229:131:228:
:145:157:168:89:159:163:158:146:::203:207:176:172:191:193:208:212:
:135:106:105:102:118:137:117:26:::239:53:225:223:62:144:59:240:
Perm. No.:  147348754151368076229721619339065 68
```



For audio (midi): sf-6-4-3-2-6-5-5-6-5-4-4-4-3-2-1-2-2-1-1-4-2-5-6-6-4-5-5-6-1-6-1-1-3-4-4-5-6-3-5-2-5-4-1-6.mid

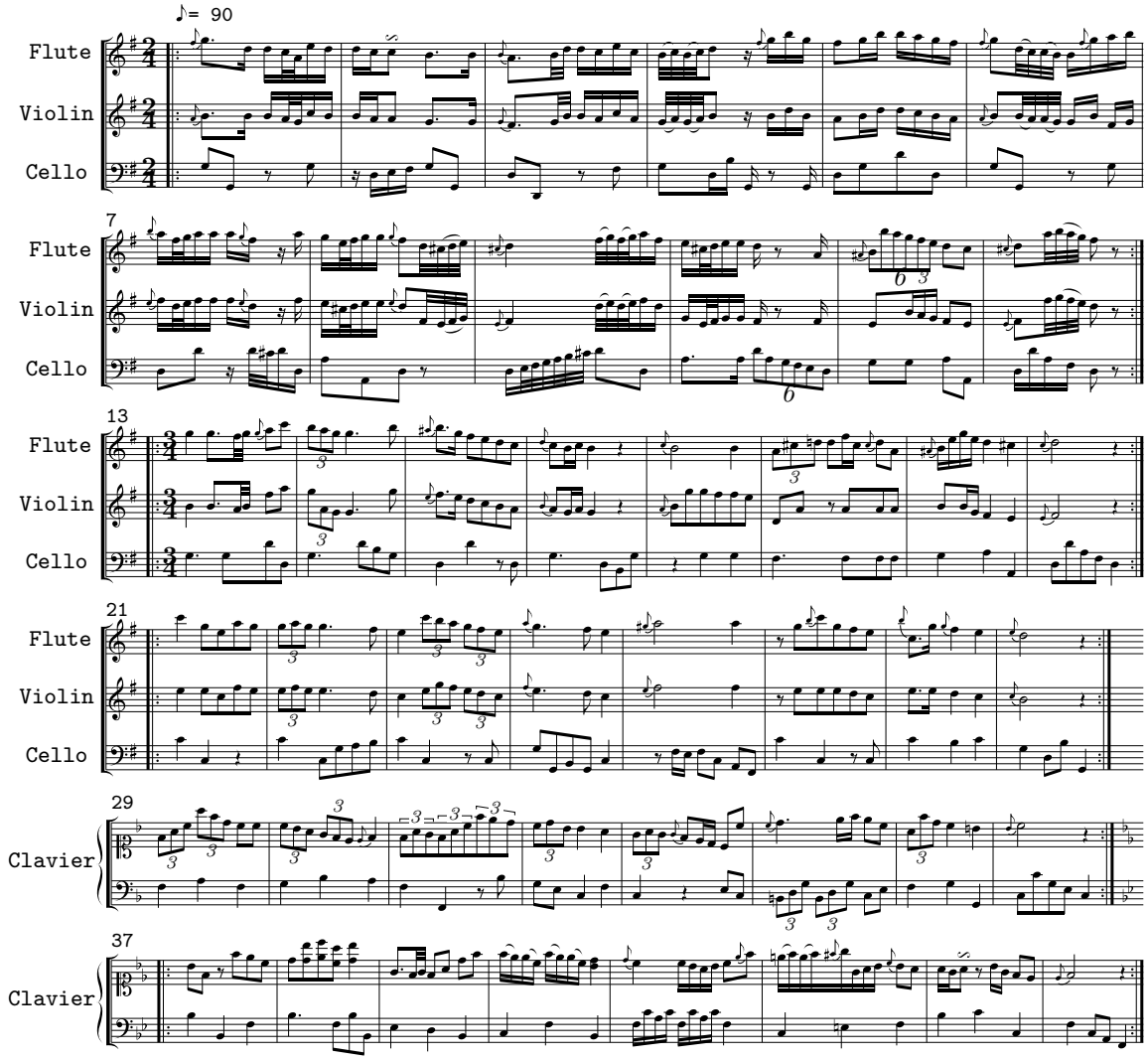
6-4-6-5-1-4-6-1-6-1-4-3-1-2-4-1-1-6-1-4-6-3-6-1-1-1-2-4-1-4-2-1-6-3-2-6-3-4-1-1-1-2-5-6

```
sf::1:134:7:278:10:236:9:276:271:3:131:128:
:161:157:94:79:167:76:158:146:::169:189:176:214:217:213:180:196:
:135:122:111:102:71:120:30:66:::49:64:40:246:39:35:46:240:
Perm. No.:  164422335887716529380175923075357 56
```



For audio (midi): sf-6-4-6-5-1-4-6-1-6-1-4-3-1-2-4-1-1-6-1-4-6-3-6-1-1-1-2-4-1-4-2-1-6-3-2-6-3-4-1-1-1-2-5-6.mid

6-5-4-5-1-4-5-3-1-6-4-2-6-6-3-2-6-1-6-2-2-5-1-2-6-5-1-5-5-4-4-4-6-2-5-6-6-1-4-1-6-3-5-2
sf::1:17:133:278:10:236:16:230:12:275:131:18:
:74:82:149:89:77:163:92:84:::203:207:218:206:175:193:174:204:
:135:122:32:28:71:109:112:66:::239:37:61:246:242:43:46:42:
Perm. No.: 504072080487467325755195507229210 6



For audio (midi): sf-6-5-4-5-1-4-5-3-1-6-4-2-6-6-3-2-6-1-6-2-2-5-1-2-6-5-1-5-5-4-4-4-6-2-5-6-6-1-4-1-6-3-5-2.mid

6 License

This work by I Am The Author, based on work of J.L.A. Uro at https://github.com/justineuro/mdgBookSVG10Kit, is licensed under a Creative Commons Public Domain International License.

References

Ivars Peterson. Mozart's Melody Machine, 2001. URL https://www.sciencenews.org/article/mozarts-melody-machine-0. Retrieved Tuesday, 08 August, 2017 11:36:00 AM +08. 3

Franciscus Schola. *Musicalische Cabala*, 1773. URL https://imslp.org/wiki/Musicalische_Cabala_(Schola%2C_Franciscus). Retrieved Saturday, 18 May, 2025. 3

Wikipedia: *Musikalisches Würferspiel*. Wikipedia, The Free Encyclopedia, 2017. URL https://en.wikipedia.org/w/index.php?title=Musikalisches_W%C3%BCrfelspiel&oldid=787418377. Retrieved Tuesday, 08 August, 2017 12:56:17 AM +08. 3