CONCERT SCORE

OPEN INSTRUMENTATION

gravity no. 1

KRIS TINER

January - June 2007

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For J

COMPOSITION NOTES: GRAVITY NO. 1

GRAVITY POINTS

Gravity No. 1 is the first in a series of compositions that examine my concept of *gravity points*. This system provides a method of selecting pitch and harmonic material via a conception of intervallic relationships in which prescribed intervals above a given frequency are duplicated as a "mirror image" below that frequency. The notation is borrowed in part from musical *set theory*, where semitones away from a central pitch '0' are numbered 1, 2, 3, etc. to 11 (the major seventh interval) and then the series starts over again.

So for instance, a gravity point that appears thus:

B : 1 : 3 : 5 : 6

…indicates that by taking **B** as the central (or "zero") pitch, the intervals of a minor second (1), minor third (3), perfect fourth (5) and augmented fourth (6) are allowed both above and below. The resultant pitch sequence would be as follows:

F – F# – G# – A # - **B** – C – D – E – F

…which in traditional tonal thinking looks like an octatonic scale with F as the root. However, for the improviser this "gravity point" really identifies a set of frequency relationships that can extend in either direction (ascending or descending) from a central pitch (or gravity center) without losing their vibrational properties. Melodic and harmonic shapes may be transposed to other parts of this "two-dimensional" scale with very interesting results. And from any of the pitches in this set, secondary gravity points may be constructed that utilize the intervallic properties implied by the primary center. For example, by extracting the relationships surrounding the pitch **D**:

D : 2 : 3 : 4 : 6

…this new point may then be altered and/or expanded:

D : 1 : 2 : 5 : 6

…and juxtaposed against the original **B** set so that now two or more points may be explored simultaneously. The resulting frequency relationships engage a *multi-centric* system (a "solar system" if you will), as opposed to scale systems that ascend from and descend back to a single tonal center.

Gravity No. 1 makes use of *transposing gravity points*, which means that in the above example the pitch **B** in any octave would be acceptable as the gravity center. Simultaneous performance of these pitches in different octaves is also acceptable, so an individual performer might transpose the given pitches at will. The intervallic relationships will remain (1=11, 2=10, 3=9, 4=8, 5=7, 6=6).

Future compositions in this series will make use of *non-transposing gravity points*, which will indicate intervals wider than 6 (the tritone) in order to orchestrate gravitational pitch centers that stretch across multiple registers, retaining their frequency relationships from top to bottom without octave duplication (and hence, providing a much more challenging context for the improviser).

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FORMAL ASPECTS

A single, continuous melody runs through the center of each page. This melody is broken up into eleven numbered sections. Above and below the melody are expansions, augmentations, and diminutions of the melodic material as well as improvisational transposing gravity points that are derived from pitch relationships within the melody. This additional material is designed to further orchestrate the composition so that material on the top half of the page is expanded melodic or figural components, while material on the lower half of the page should be thought of as harmonic zones for accompaniment, bass lines, pedal points and/or percussion ostinati. All of this secondary and improvisational material is modular in function, and it need not be performed in numerical order. In fact, the entire composition is designed integrally so that a performance may start or finish at any point; starting at the beginning and finishing at the end would be only one possible realization.

The organization of melodic material is based on an 11-part arch form (ABCDE-F-EDCBA) that derives partly from the transpositional properties unique to the 1-11 numerology of set theory in equal temperament (with the tritone at the central/sixth position), and partly from the "mirror image" quality of the gravity point concept. The tonal centers of each section proceed based on a *web form* (my term, ABCDB-E-FDCFA) superimposed over the arch. Section 6, being the midpoint of both schemes, derives its melodic identity from the dominant properties of each of the other ten sections in sequence. The two halves (sections 1-5 and 7-11) are related by way of the tritone relationships of B to F and D to G#, with the pitch E serving as something of a foil to disrupt the regularity of the tritone occurrences. These five generating pitches, with E at the center, are also the initial five melodic pitches at section 1 (an awkward nod to Beethoven, perhaps). The construction of material within each section derives also from inversions and "gravitational transpositions" of this pitch set, with sections 1 and 11 the exposition of primary melodic material, sections 2 and 10 exploring the (: 1) identity, sections 3 and 9 exploring the (: 2 : 4) identity, sections 4 and 8 being freer episodes based on transpositions of (: 2), and sections 5 and 7 each being based on complimentary hexachords. Further, the "mirror" idea appears in many of the percussion figures as rhythmic palindromes or retrogrades of previous material.

PERFORMANCE INSTRUCTIONS

Repeat zones are a device I use to expand upon notated material while keeping a performance focused on a fixed set of options. There are two types: *simple repeat zones* (single-barred) and *nested repeat zones* (double-barred). Material that is placed within nested repeat zones may be routed at the will of the performers, according to the exigency of the music. Generally any backward repeat may jump any number of times to any forward repeat within a set of nested repeat zones, but cannot jump past either double-barred repeat sign until the performer has decided to or is cued to move on to the next section.

Vertical dotted lines indicate points where a performer may choose to move to the modular expansion material. Once the expansion material has been played, if the performer wishes to return to the primary melodic line(s)he would do so by returning to that initial point of departure. In some cases the vertical dotted line represents a unison entrance of bass and percussion within the accompaniment material; during such unison moments one of the performers may be required to give a cue when the music is to go on.

Rhythms are relative to each other and may or may not follow a uniform pulse. Non-stemmed note heads are to be interpreted simply as either short (black) or long (white) values. All fermatas (and their durations) are optional and may or may not be observed on each pass within a repeat zone. Tempo, timbre, dynamics, and articulations are very minimally notated so performers should feel free to contribute their own interpretation with regards to these elements.

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Typically performers should begin with the primary melodic material in a section and then gradually incorporate repeat zones and expansion material, eventually moving toward the improvisational gravity points. When a gravity point is attached by a dotted line to a note in the score, this indicates a point in the music where the performer may digress from the notated material and begin to improvise in the pitch-space determined by that gravity point. When a gravity point follows notated material on the same staff (usually connected by a slur), the performer is to continue on in the manner of the preceding material, but now improvising using the pitches indicated. If a gravity point is connected to another gravity point by an arrow, the performer is expected to make that transition in pitch selection during the course of their improvisation. Sometimes more than one of these options may be available; in that case the decision is left up to the performer.

IMPROVISATION AND EMERGENT ZONES

Different than many of my other compositions for improvisers, in this piece there are no specific points indicated where the performer(s) may launch into non-controlled improvisation. Performers should feel that improvisation is a possibility for them at any time, should the music warrant them doing so. This kind of allowance requires that the performers become aware of *emergent zones* in the music, that is, confluences of sound-events that bring the *total music* into a manifest domain of meta-possibilities that are beyond the reality of the written music. This kind of ensemble interaction is certainly the goal of this music, after all, and its implication lies behind every written note.

Kris Tiner
Los Angeles, CA, January 6, 2007
Bakersfield, CA, June 15, 2007

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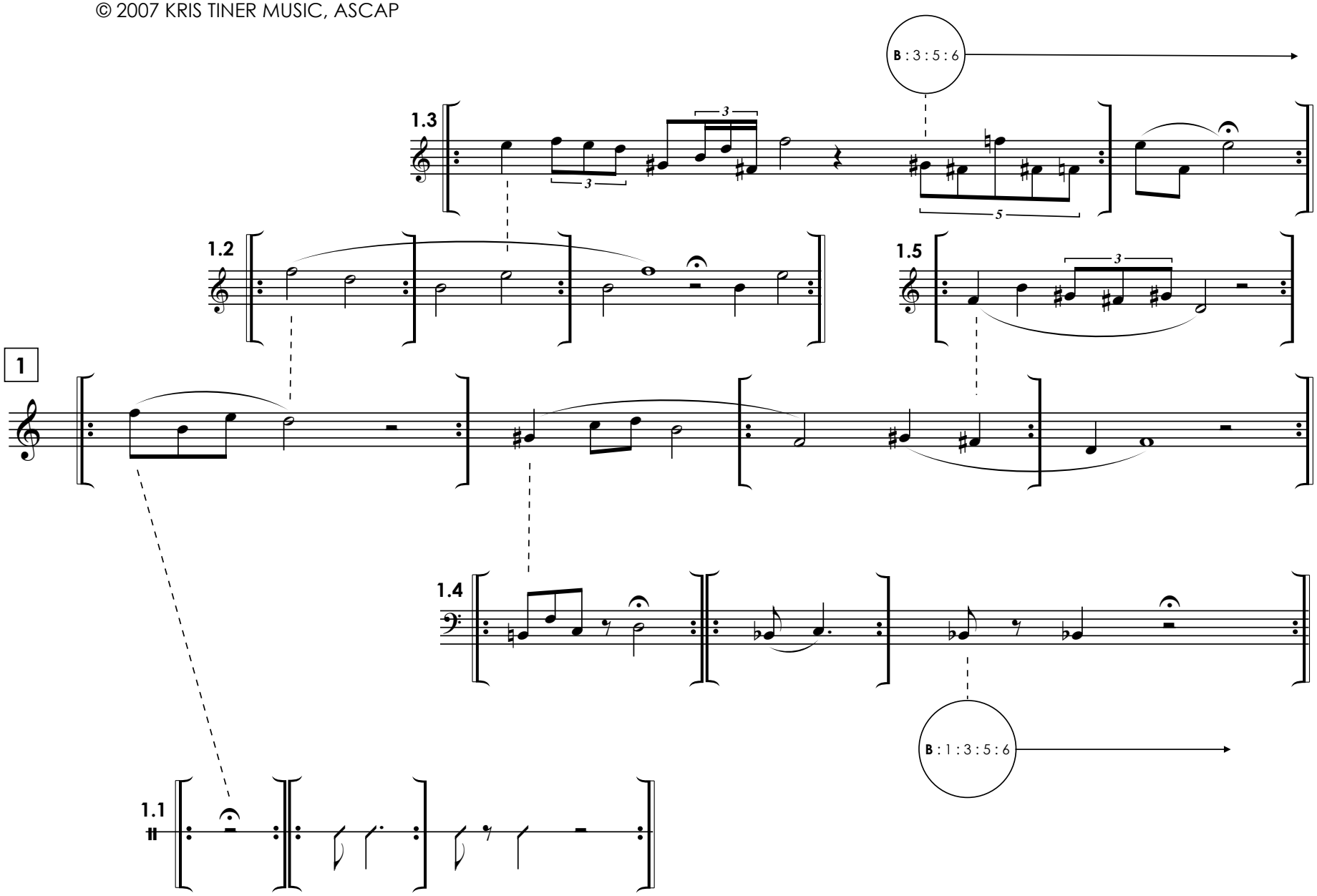

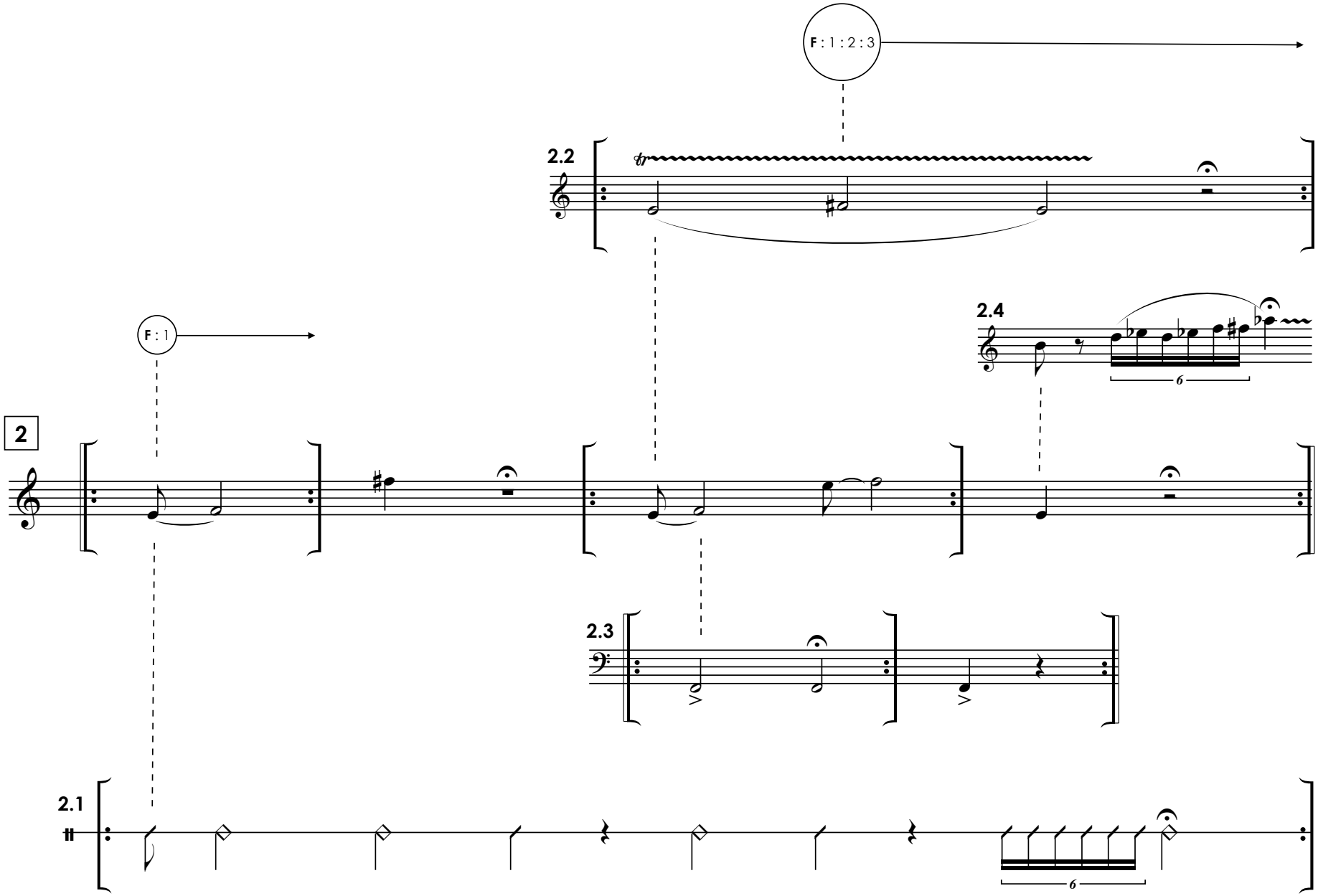
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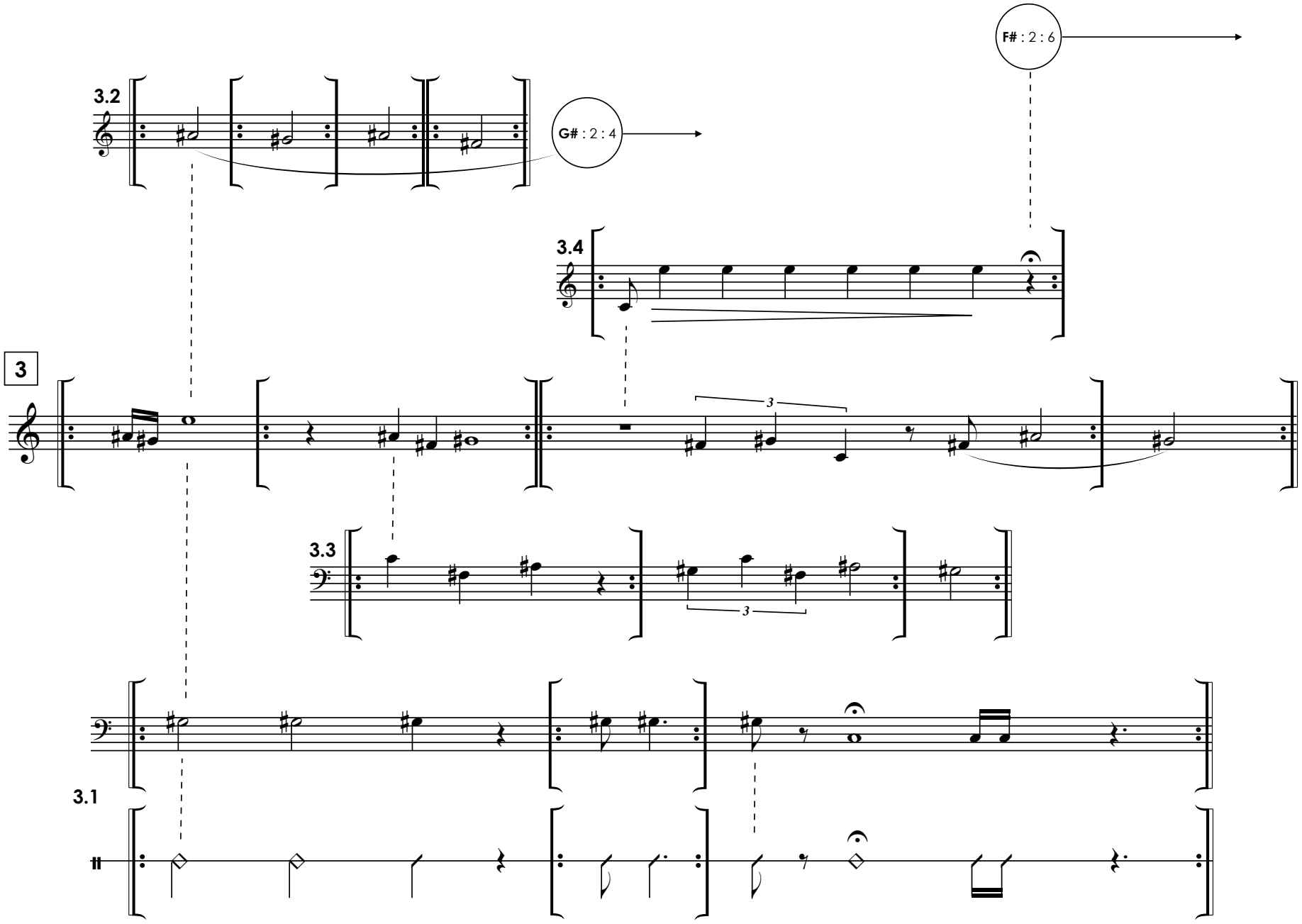
2.2
F : 1
2.4
6
2
2.3
2.1
6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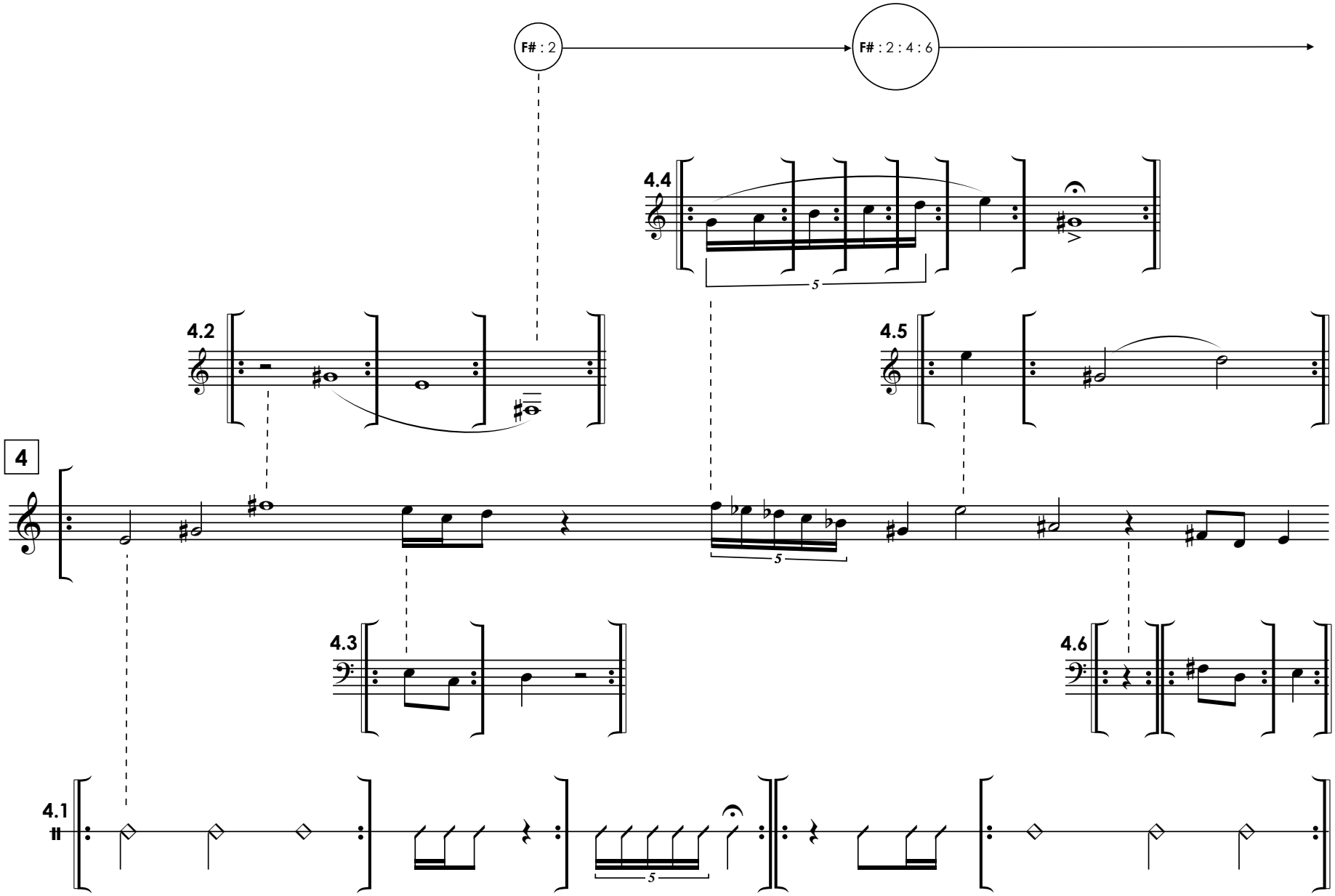
G# : 2 : 4
3.4
3
3
3.3
3
3.1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F# : 2 : 4 : 6
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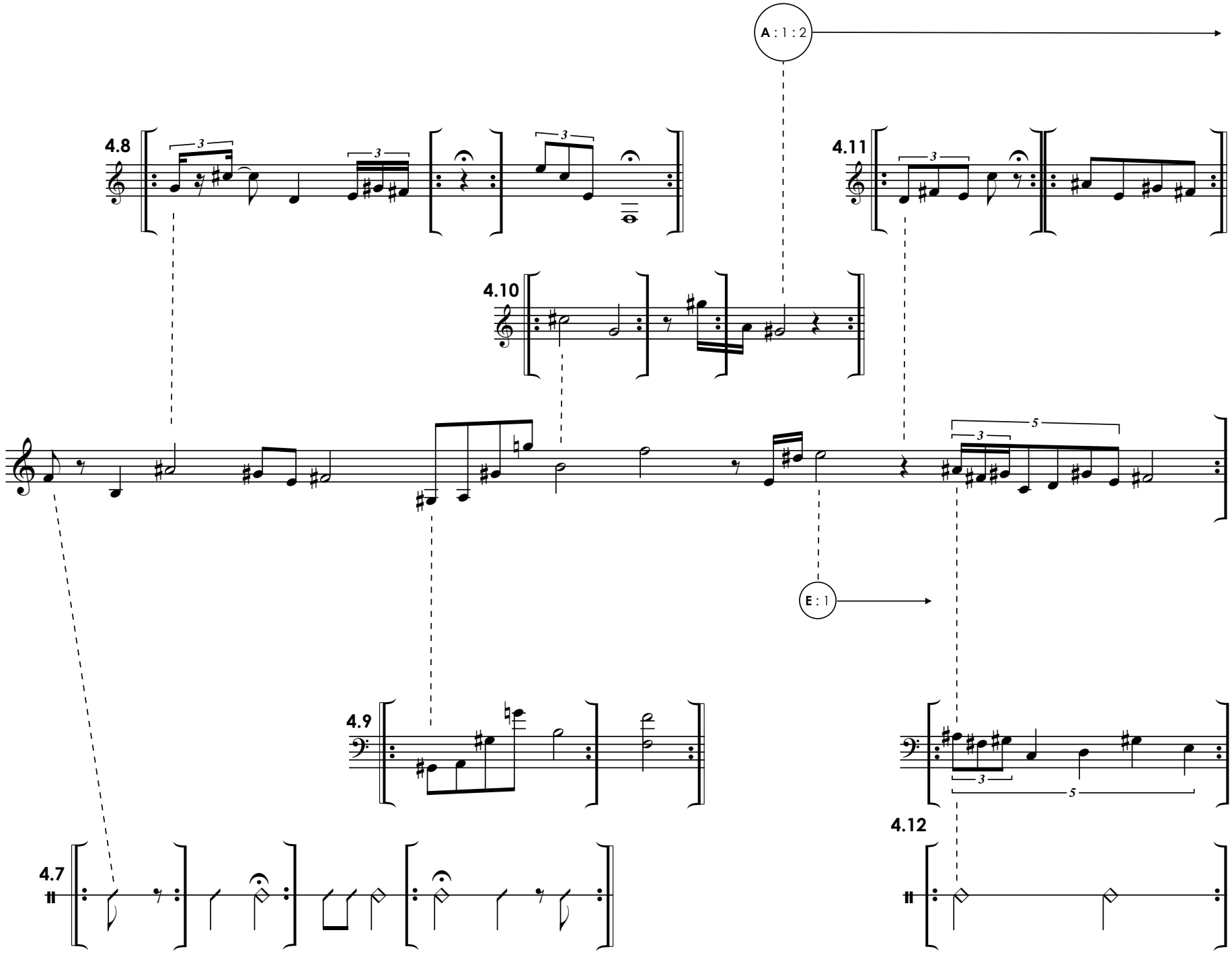
4.2
4.5
4
4.3
4.6
4.1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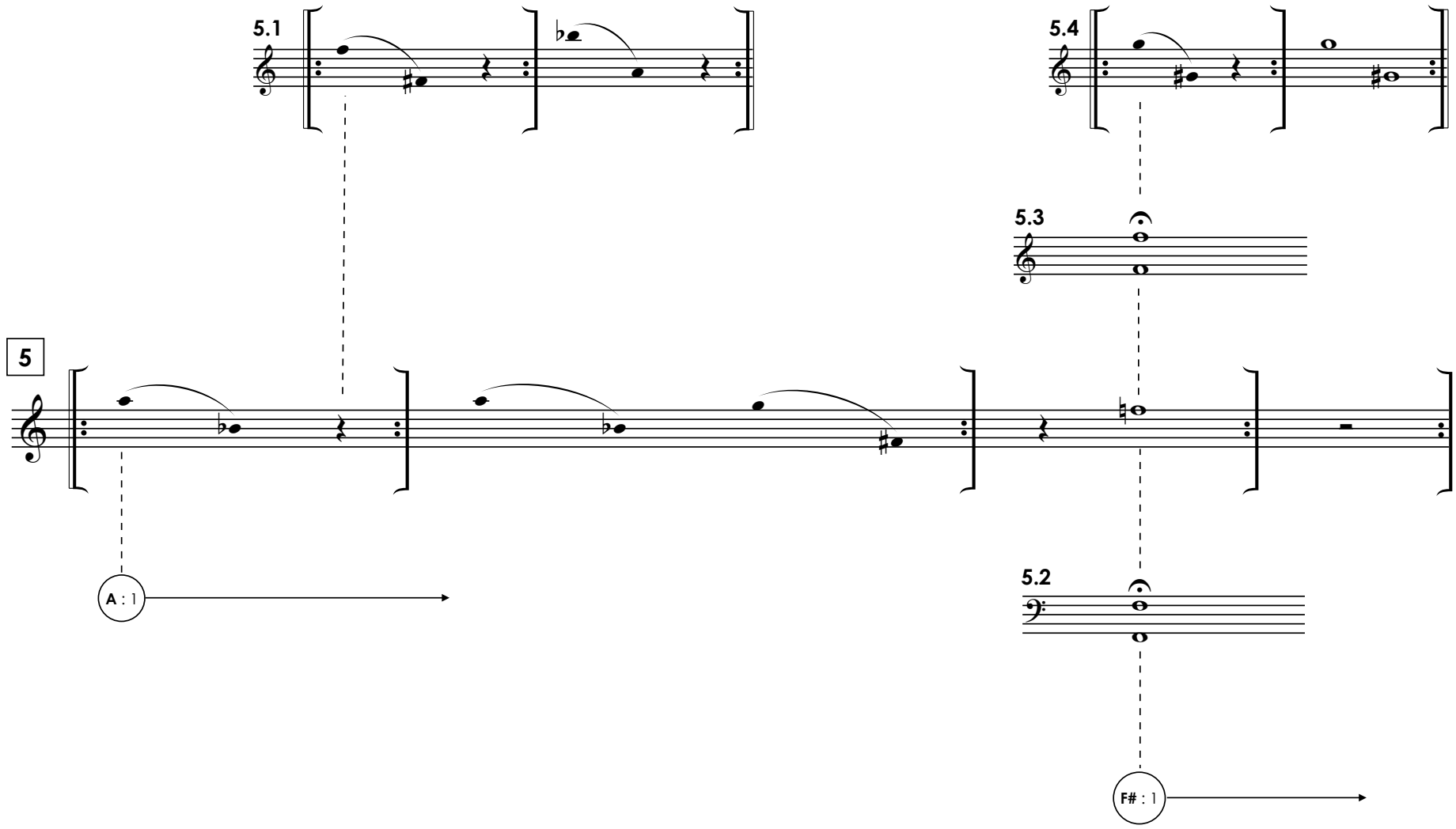
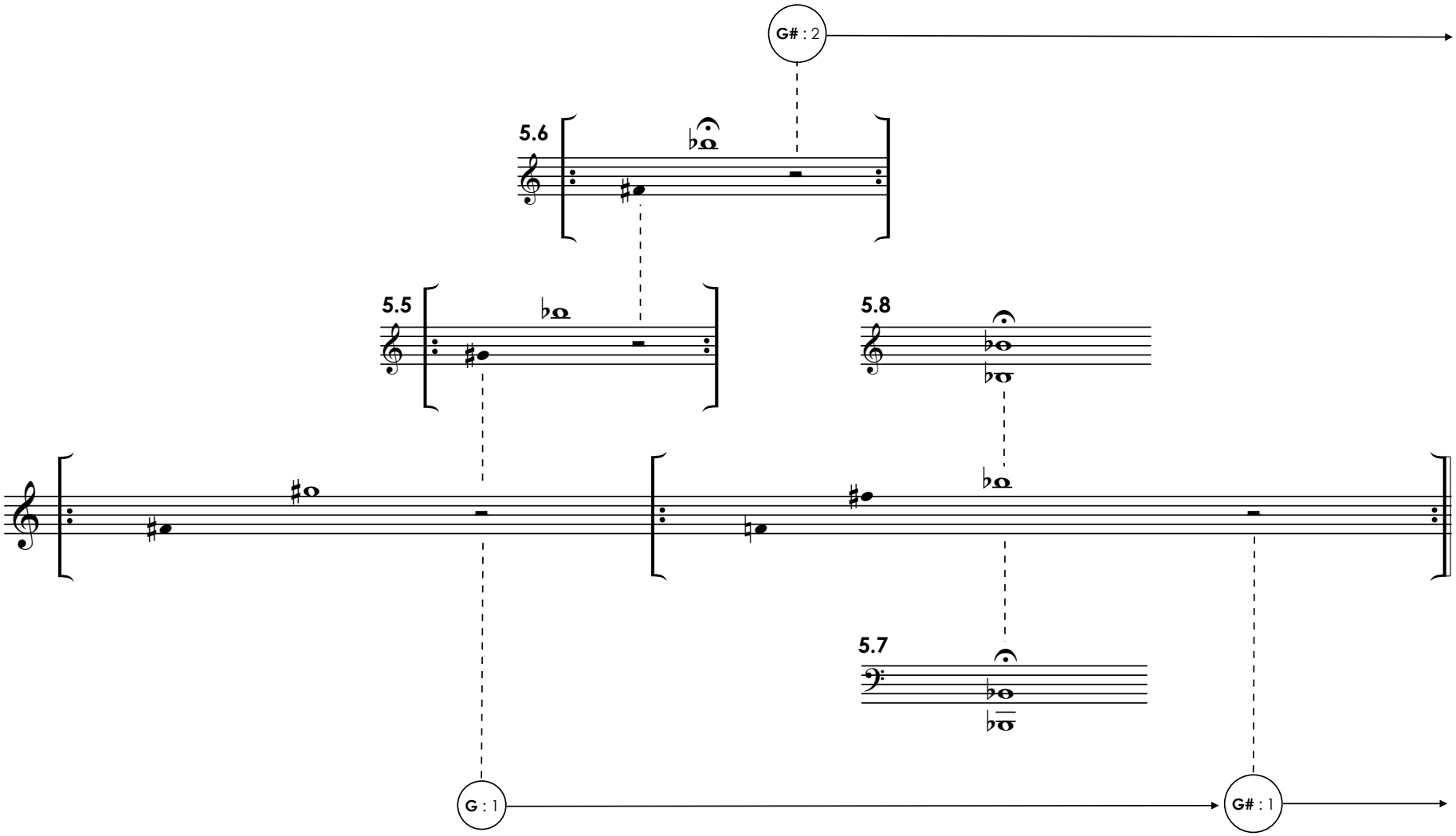
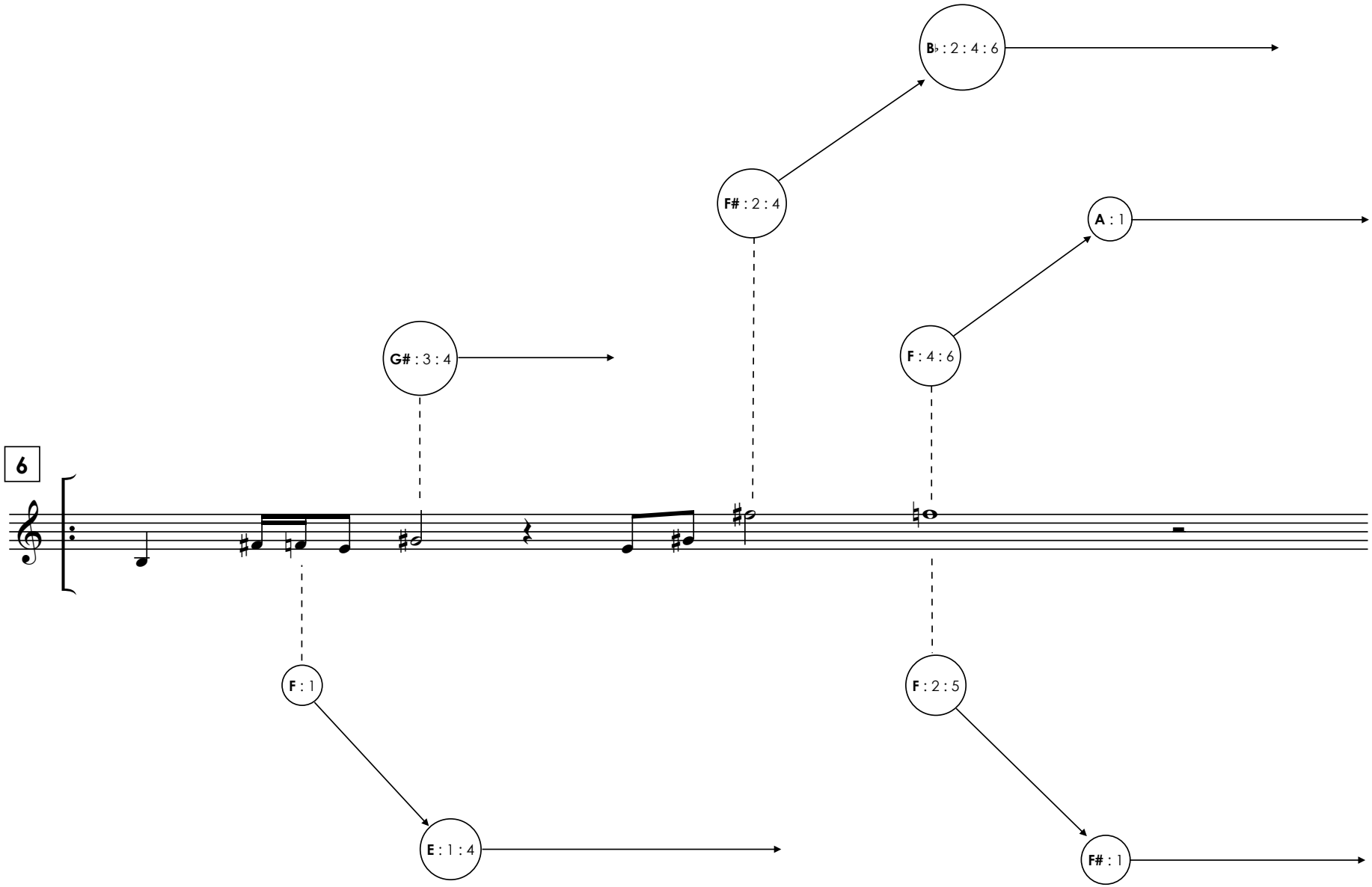
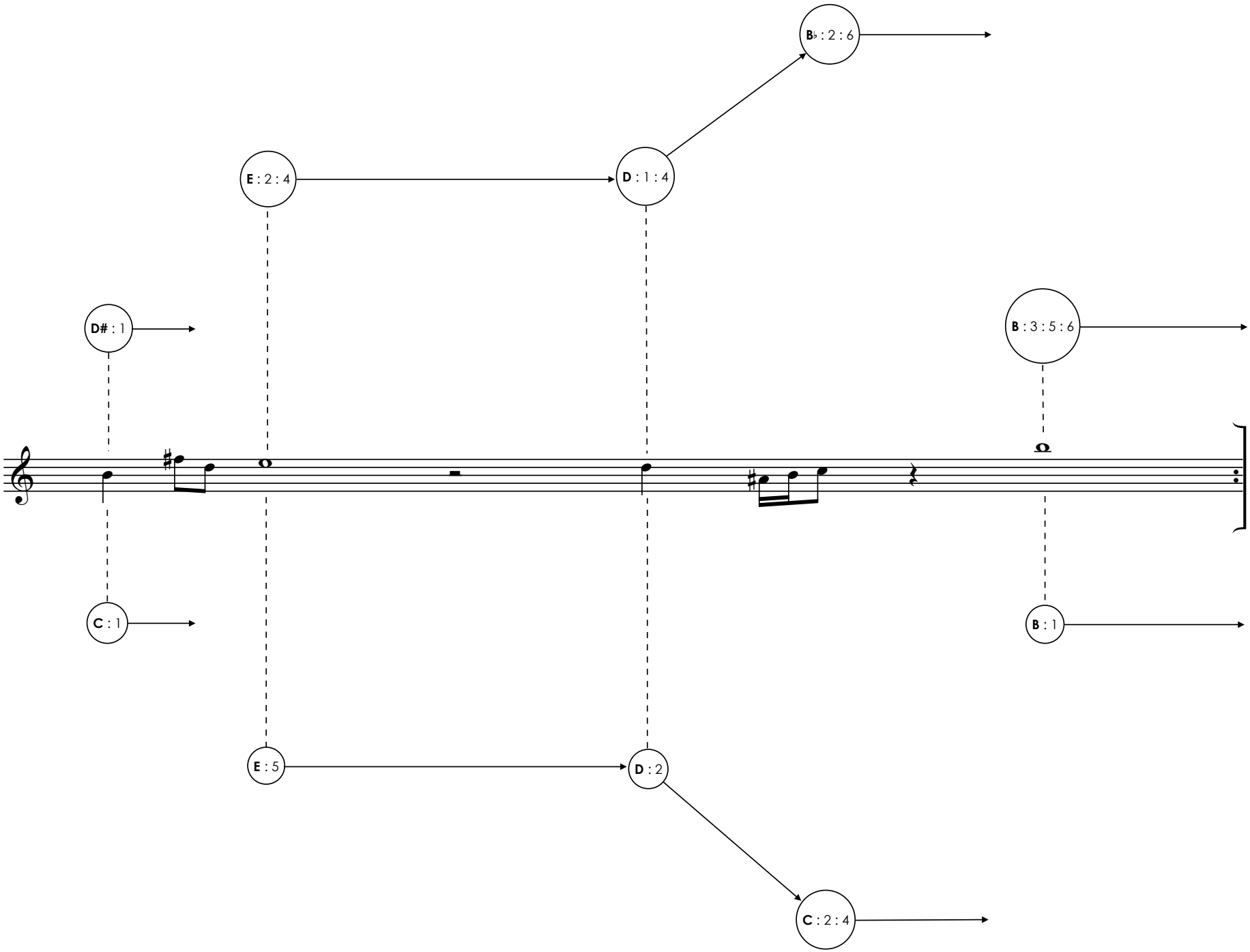
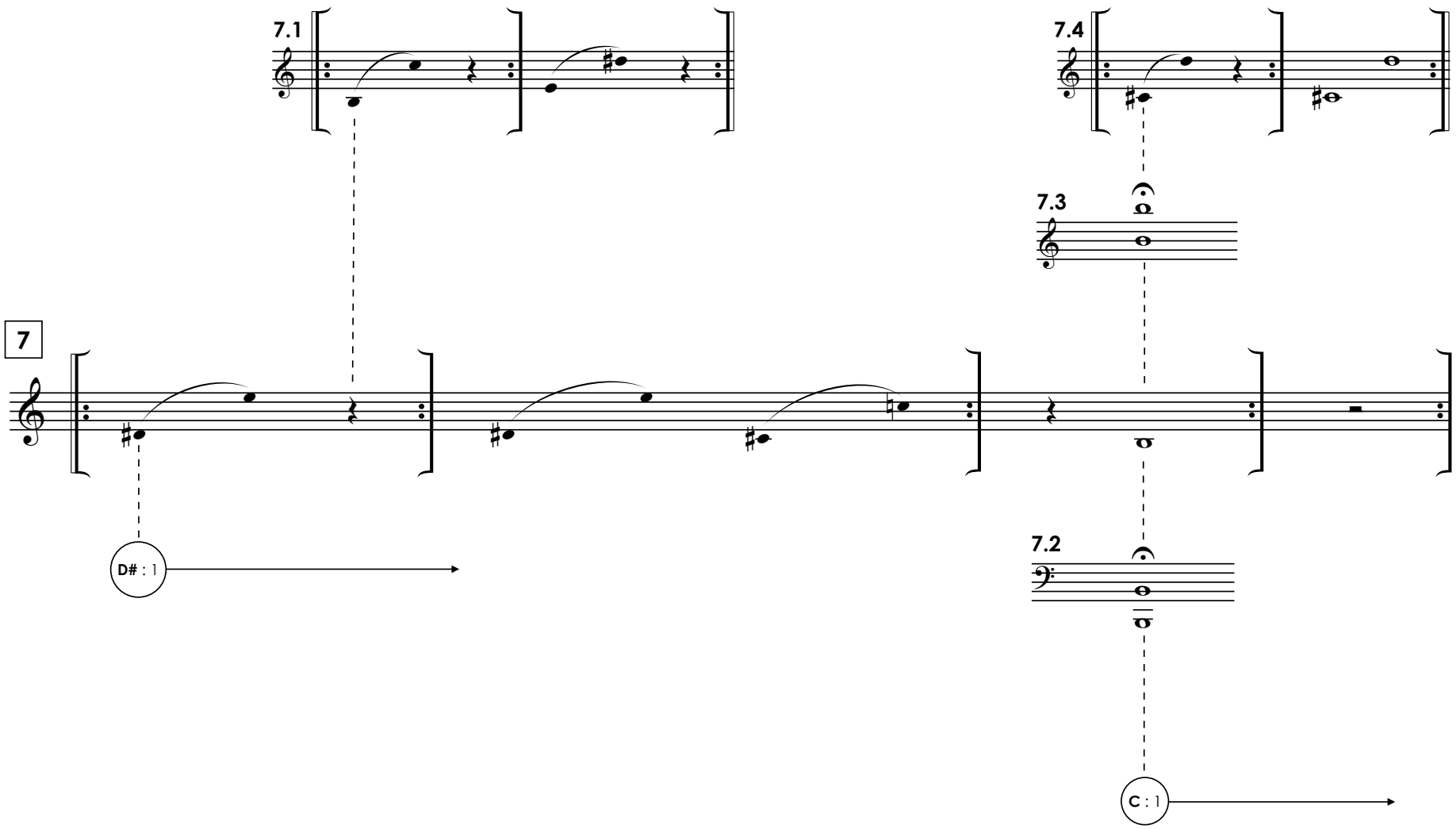
4.8
4.11
4.10
E : 1
4.9
4.7
4.12

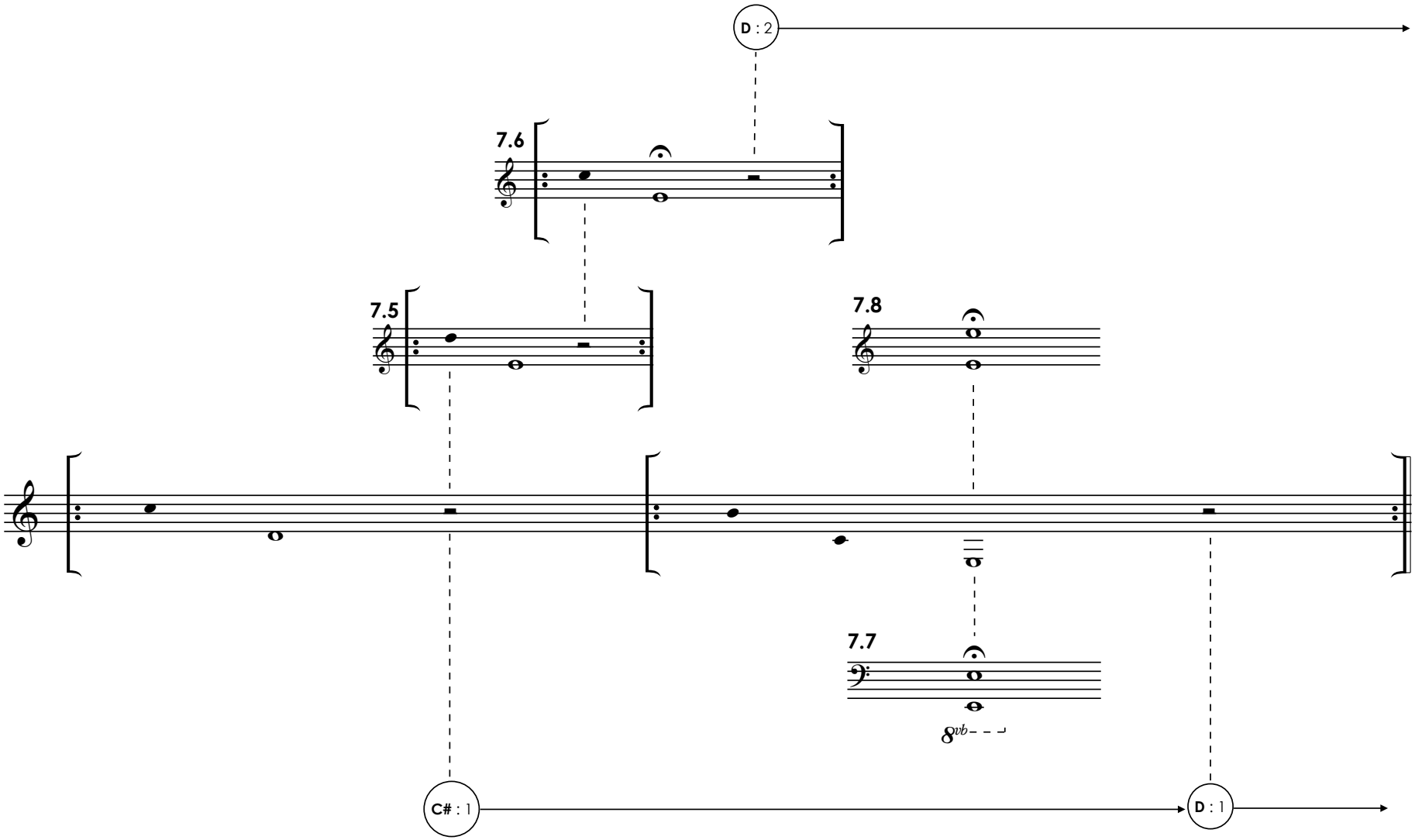

5.1
5.4
5.3
5
5.2
A : 1
F# : 1


G# : 2
5.6
5.5
5.8
5.7
G : 1
G# : 1


B♭ : 2 : 4 : 6
F# : 2 : 4
A : 1
G# : 3 : 4
F : 4 : 6
6
F : 1
F : 2 : 5
E : 1 : 4
F# : 1


B♭ : 2 : 6
E : 2 : 4
D : 1 : 4
D# : 1
B : 3 : 5 : 6
C : 1
B : 1
E : 5
D : 2
C : 2 : 4


7.1
7.4
7.3
7
7.2
D# : 1
C : 1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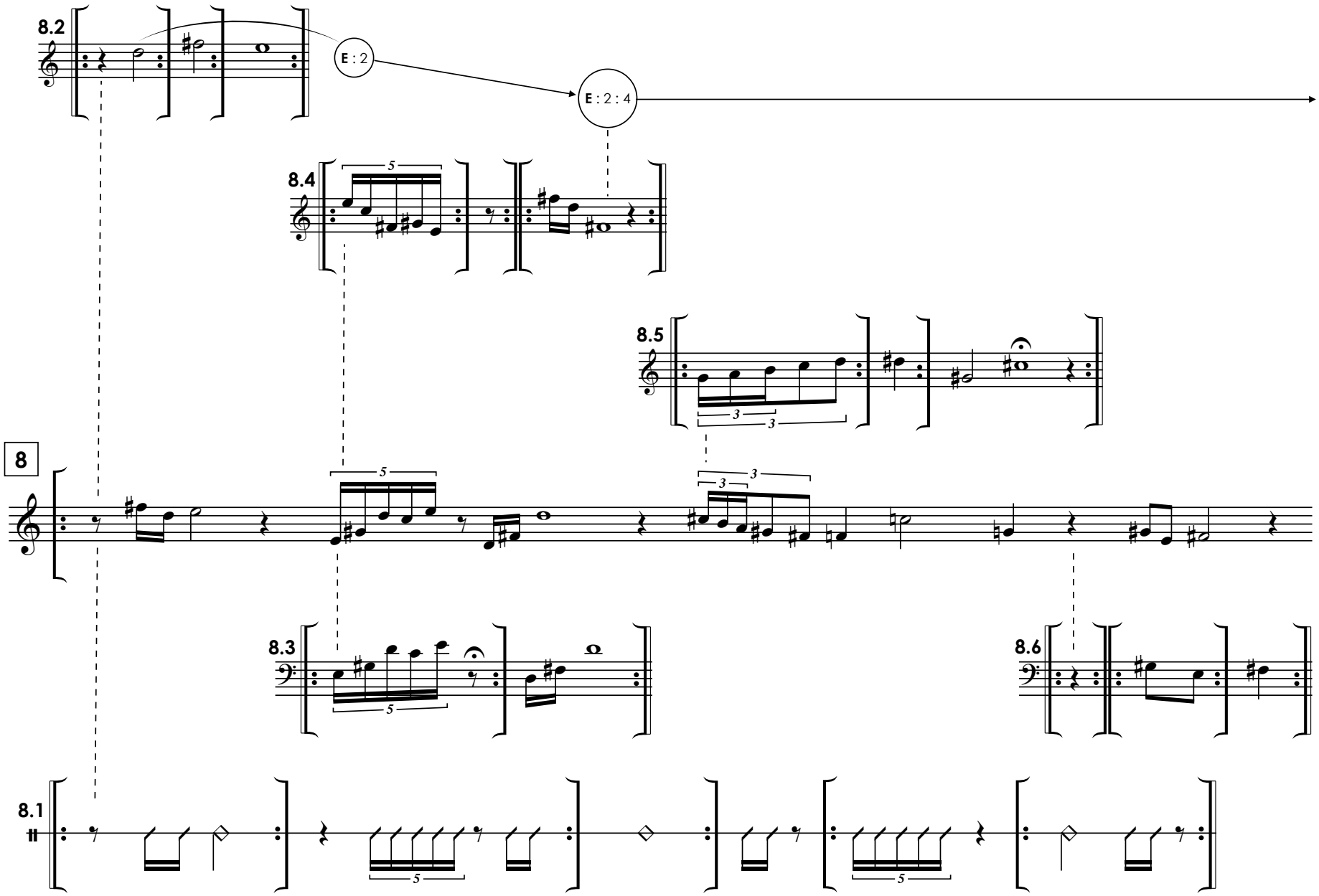
7.8
7.7
8vb
C# : 1
D : 1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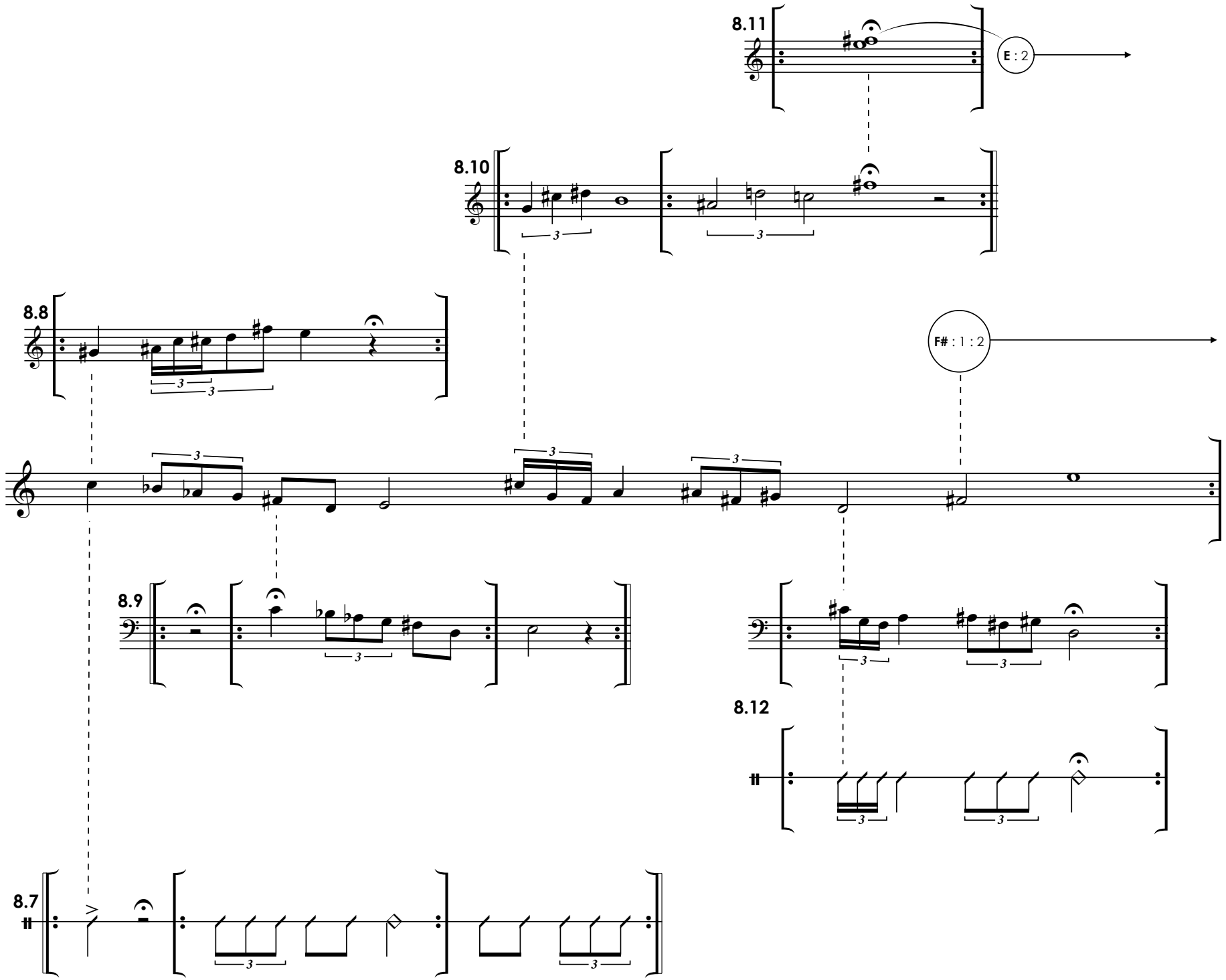
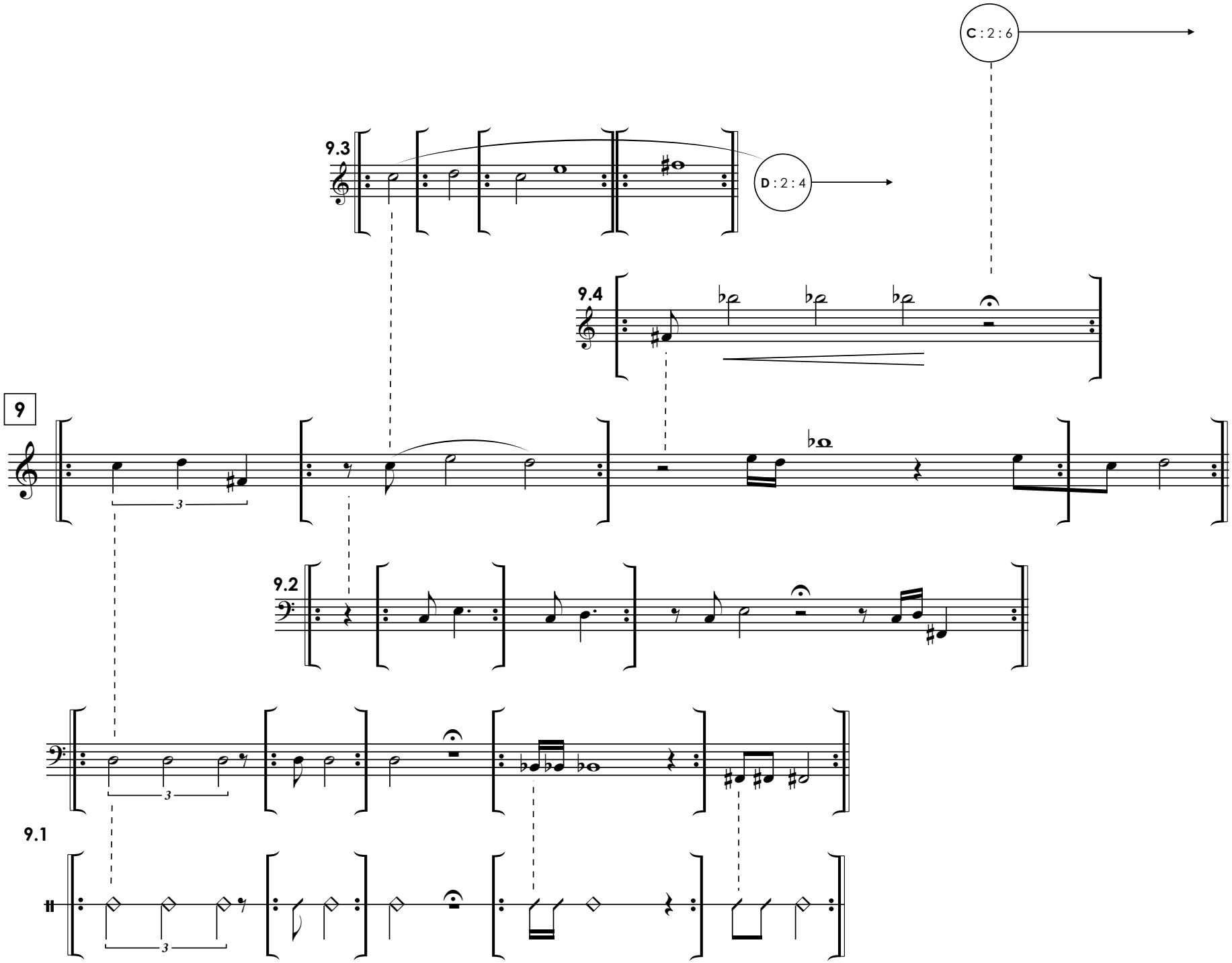
E : 2
E : 2 : 4
8.4
8.5
8
8.3
8.6
8.1


8.11
E : 2
8.10
8.8
F# : 1 : 2
8.9
8.12
8.7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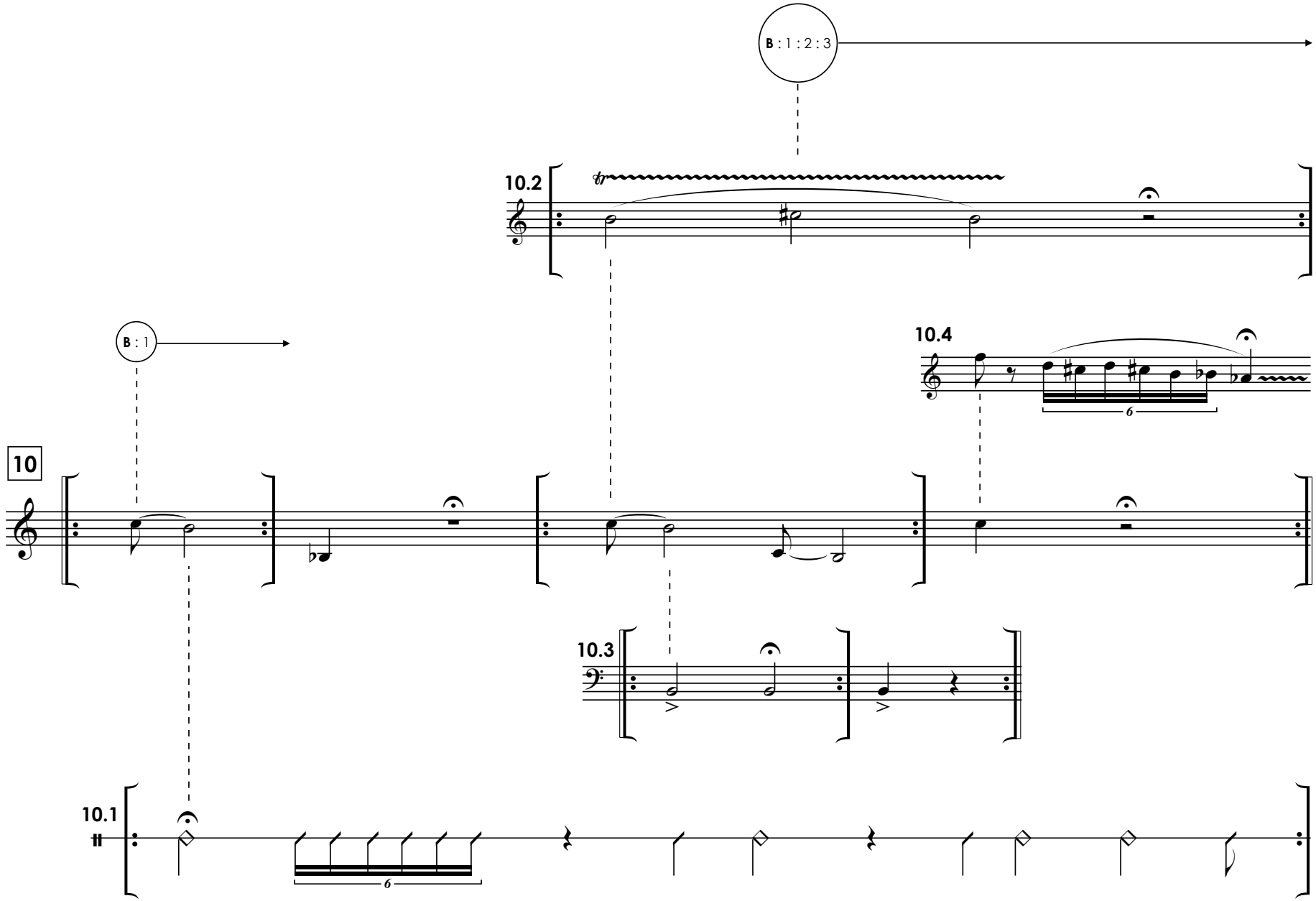
9.3
D : 2 : 4
9.4
9
9.2
9.1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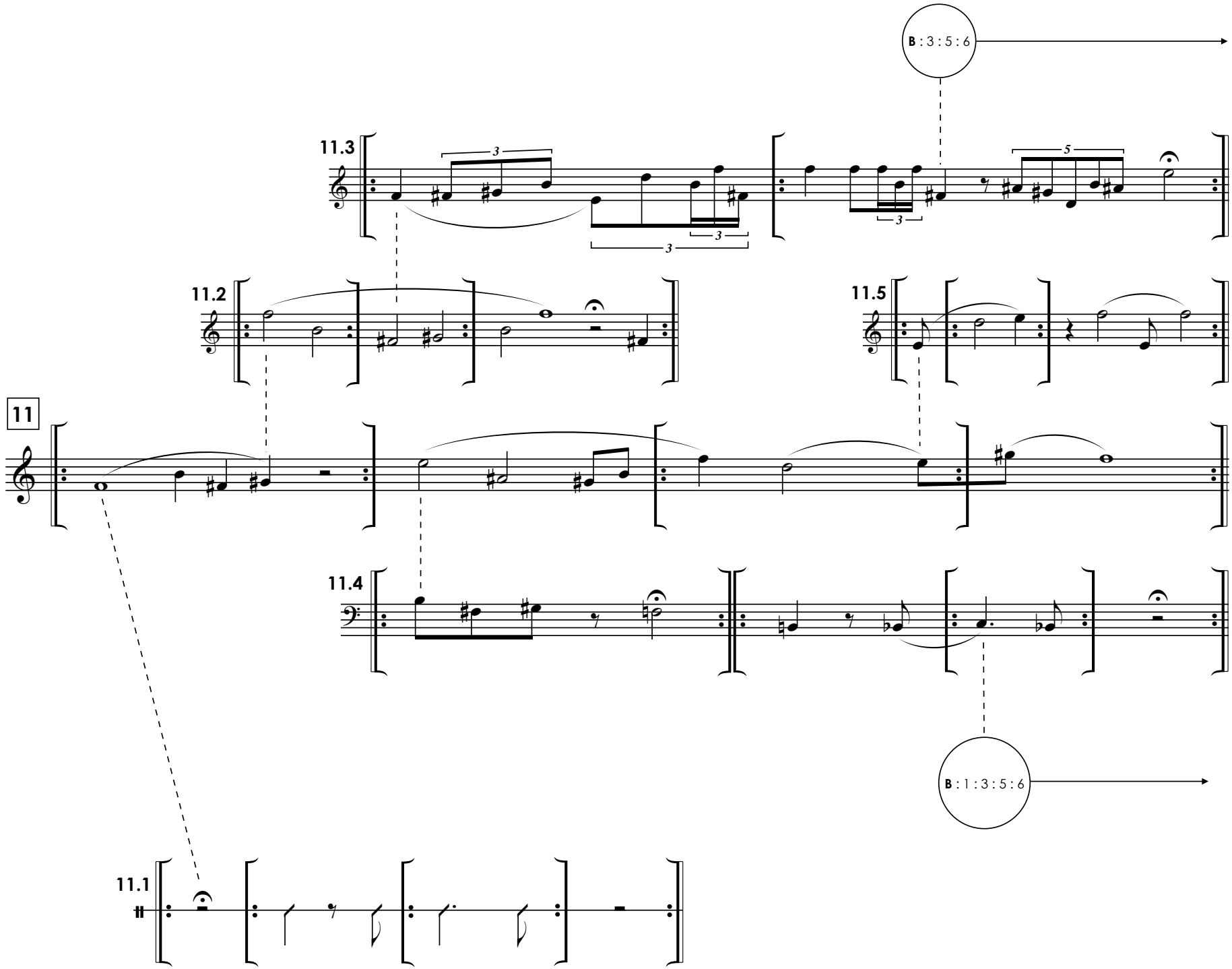
10.2
B : 1
10.4
10
10.3
10.1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11.3
11.2
11.5
11
11.4
B : 1 : 3 : 5 : 6
11.1