KEYBOARD BENCHMARKS

First Part

Practice Materials and Study Guide

2nd Edition

Compiled by the Ave Maria University Department of Music

Contents

Rationale for the Keyboard Benchmark Requirement

The Keyboard Benchmarks Requirement is now a distinguishing feature of the program in music at Ave Maria University. This component of our curriculum sets us apart from other institutions because of its challenging nature and because it envisions a long-term arc for developing key competencies that will serve the musicianship of our students for their entire lives.

The keyboard is a theoretical power-house, and familiarity with its geography and application opens up the minds of our students to thinking *in music*. Learning to *speak pure music* at the keyboard is comparable to learning French in Paris, or Italian in Rome. Our goal is a native understanding of the elements of music through music's greatest tool: the keyboard.

We are just as interested in the keyboard preparation of our vocal students as our pianists and organists. Our hope is that our program be known for producing singing musicians instead of just singers. The keyboard is the window into higher musicianship for singers that can lead to a richer experience of music and a greater expectation of employability.

In short, the free use of the keyboard is the secret to unlocking a higher experience of music, both intellectually and aesthetically.

Keyboard Benchmarks for Voice Concentration	Level	Goals
Ⓐ	1.	a) Scales in all major and minor keys. b) Resolve V7 in all keys and all inversions. c) Transpose melodies d) Play a simple thorough-bass realization in 3 parts with one week's preparation.
	2.	a) Sing one's voice part of a hymn and play one or more of the other parts. b) I-ii6/5-V-I in all keys. c) Resolve all Aug 6th chords in all keys.
	3.	a) Harmonically reduce the piano part of a song or aria to a serviceable accompaniment. b) Realize a simple thorough-bass in 3 parts with 2 days' preparation.
	4.	a) Perform a suitably challenging accompaniment from the collection of 24 Italian Songs.

Keyboard Benchmarks for Piano/Organ Concentration	Level	Goals
Ⓑ	1.	a) Resolve V7 and Secondary Dominant Sevenths in all keys b) Transpose a hymn in 4 parts with 10 minutes' preparation c) Realize a simple thorough-bass in 3 parts with one hour's preparation.
	2.	a) Resolve Neapolitan 6th and Aug 6ths in all keys b) Extemporaneous modulation between given keys by most direct route
	3.	a) Transpose Mozart vocal accompaniment with one day's preparation b) Play 4-part open choral score c) Realize a simple thorough-bass in 3 parts
	4.	a) Realize a short moderately difficult thorough-bass within an hour b) Realize a difficult thorough-bass with a day's preparation. c) Play 4-part open instrumental score d) Improvise an accompaniment to a hymn-tune with 30 minutes preparation. e) Improvise an accompaniment to a chant melody with 45 mins. preparation.

How are the skills listed on this chart evaluated over my career at AMU?

The skills are broken down into each of four years for both vocal students and keyboard students. Obviously, the level of difficulty is scaled to our expectations of each cohort's skill level. **Passing the Keyboard Benchmarks is a requirement for graduation with the Bachelor of Arts in Music**. Here is how you can expect to be evaluated over the duration of your time in the music department.

Level 1 Fall (voice and keyboard schemas)	- Skills are instructed in 105A. - Individual tests are administered at the end of Freshman semester 1. You will receive a Pass or Warning as your evaluation. - Your performance in this semester does not affect your 105A grade.
Level 1 Spring (voice and keyboard schemas)	- Skills are instructed in 105B. - Individual tests are administered at the end of Freshman semester 2. You will receive a Pass or Fail as your evaluation. - Your performance in this test **will affect** your grade in 105B. - If you fail any portion of the test, you must retake and pass that component at the beginning of the following semester. Retesting is scheduled by Prof. Ostermann.
Level 2 Fall (voice and keyboard schemas)	- Skills are instructed in 205A. - Individual tests are administered at the end of Sophomore semester 1. You will receive a Pass or Warning as your evaluation. - Your performance in this semester **will affect** your 105A grade.

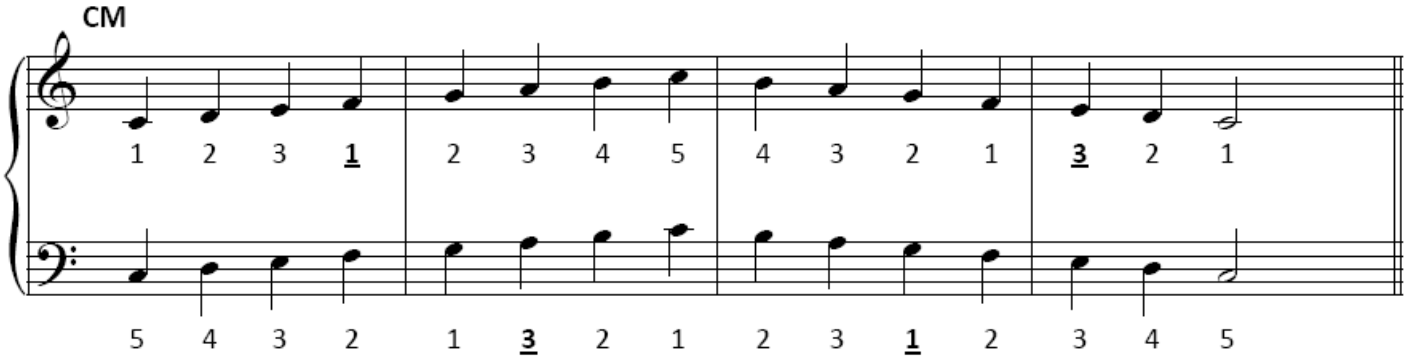
Level 2 Spring (voice and keyboard schemas)	- Skills are instructed in 205B. - Individual tests are administered at the end of Sophomore semester 2. You will receive a Pass or Fail as your evaluation. - Your performance in this test **<u>will affect</u>** your grade in 105B. - If you fail any portion of the test, you must retake and pass that component at the beginning of the following semester. Retesting is scheduled by Prof. Ostermann.
Level 3 Fall (voice and keyboard schemas)	- Skills are instructed by tutor. - Individual tests are administered at the end of Junior semester 1. You will receive a Pass or Warning as your evaluation.
Level 3 Spring (voice and keyboard schemas)	- Skills are instructed by tutor. - Individual tests are administered at the end of Junior semester 2. You will receive a Pass or Fail as your evaluation. - If you fail any portion of the test, you must retake and pass that component at the beginning of the following semester. Retesting of levels 3 and above is scheduled by Prof. Lam.
Level 4 Fall (voice and keyboard schemas)	- Skills are instructed by tutor. - Individual tests are administered at the end of Senior semester 1. You will receive a Pass or Warning as your evaluation.
Level 3 Spring (voice and keyboard schemas)	- Skills are instructed by tutor. - Individual tests are administered at the end of Junior semester 2. You will receive a Pass or Fail as your evaluation. - If you fail any portion of the test, you must retake and pass that component at the beginning of the following semester. Retesting of levels 3 and above is scheduled by Prof. Lam.

MAJOR AND MINOR SCALES

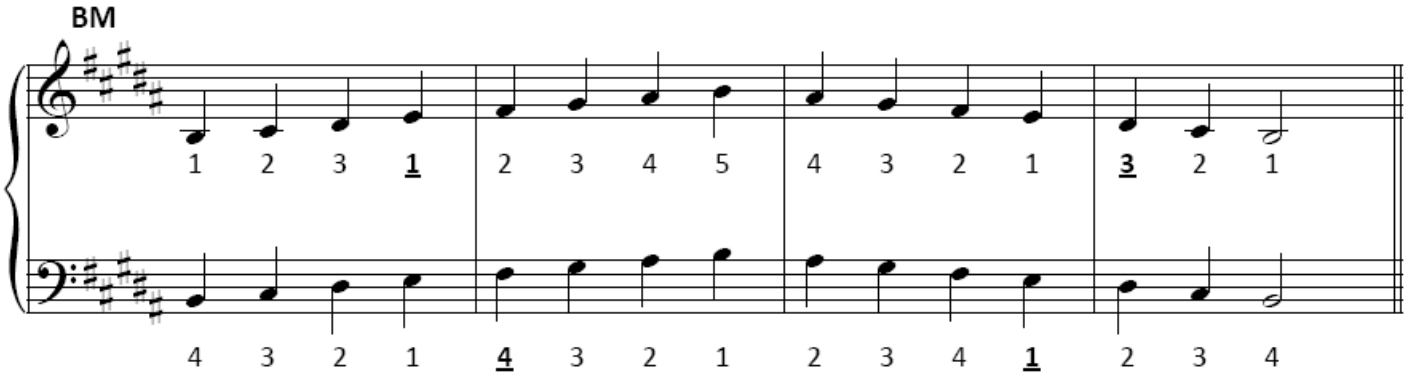
- The numbers below indicate your fingers. Thumb is always "1" and the little finger is always "5" – on both hands.
- Tuck your thumb under your palm when crossing—your elbow should not swing out. Cross the thumb under before the **underlined** finger in the scales below.
- Practice with curved fingers, as if there were a plum under your hand.
- Always use the correct fingering.
- ALWAYS use a metronome. This is one of the most important tools for all musicians.
- Accuracy is more important than speed. Do not speed up until you have mastered it slowly.
- For *harmonic minor*: Raise the seventh scale degree a half-step.
- For *melodic minor*: Raise the sixth and seventh scale degrees a half-step ascending, and lower them both (back to natural minor) descending.

White key scales:

C, G, D, A, and E major and their parallel minors all have the same fingering in both hands.

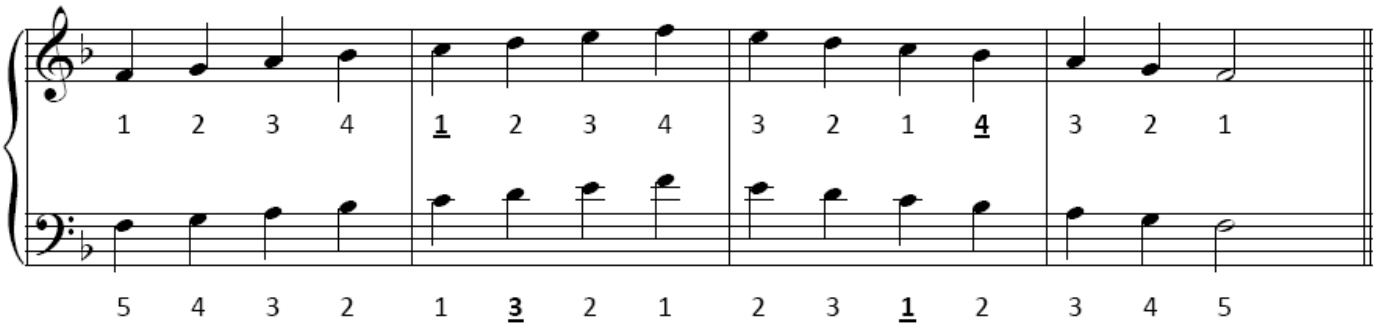


B/Cb major and b minor have the same fingering as C major (et al.) in the RH. The LH is different.



F major and f minor have the same fingering as C major (et al.) in the LH. The RH is different.

FM



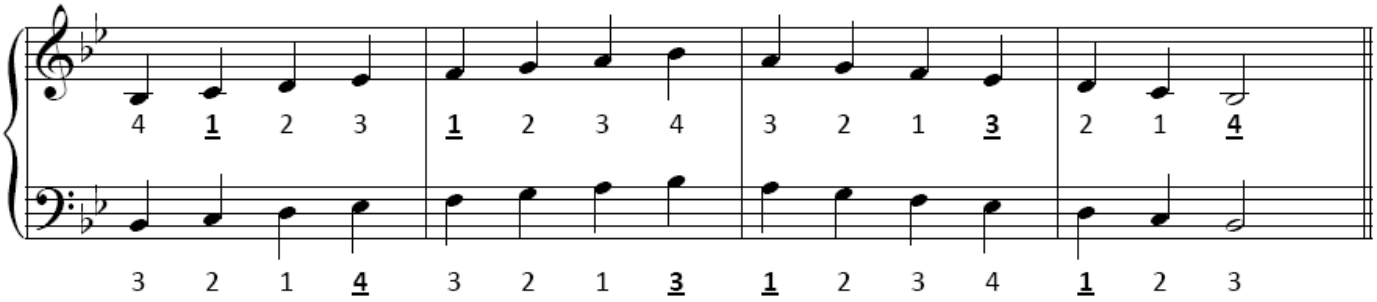
Black key scales:

-RH fingers 2, 3, and 4 play the 3-black-key groups. RH fingers 2 and 3 play the 2-black-key groups. Thus RH Bb/A# is always played by finger 4, and RH Eb/D# is always played by finger 3.

-5th fingers are not used in either hand.

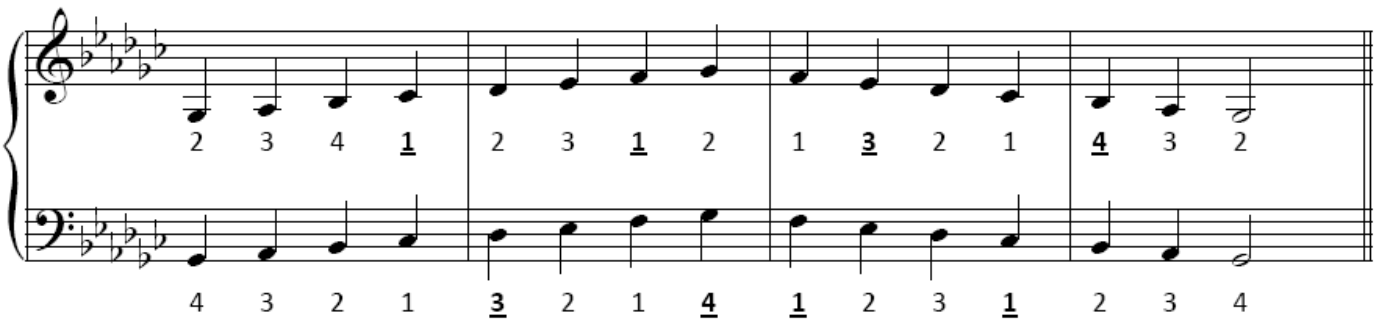
LH fingering is the same for Bb, Eb, Ab, and Db/C# major. The RH follows the black key pattern above.

BbM



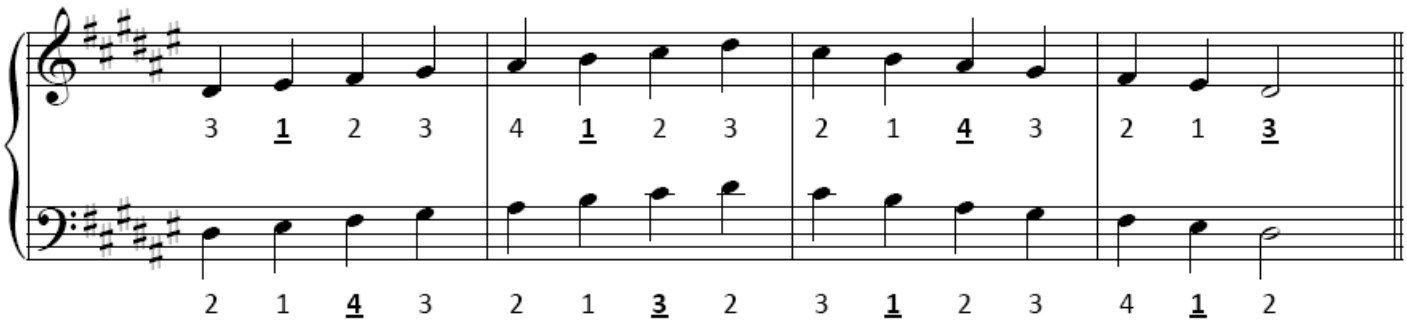
In Gb/F# major, the LH differs from the other major black key scales. The RH follows the black key pattern above.

GbM



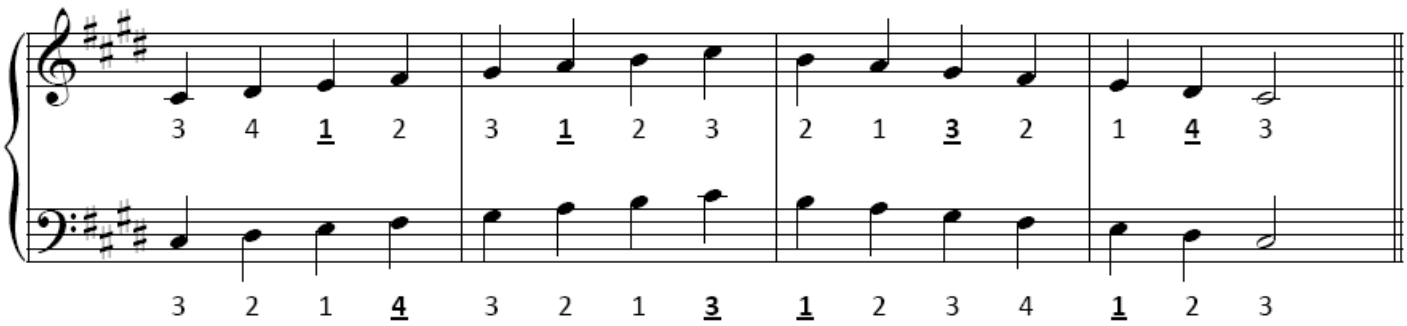
In D#/Eb minor, G#/Ab minor, and A#/Bb minor, LH 4th finger always plays F#/Gb, and LH 3rd finger always plays C#/Db. The RH follows the black key pattern above.

D#m



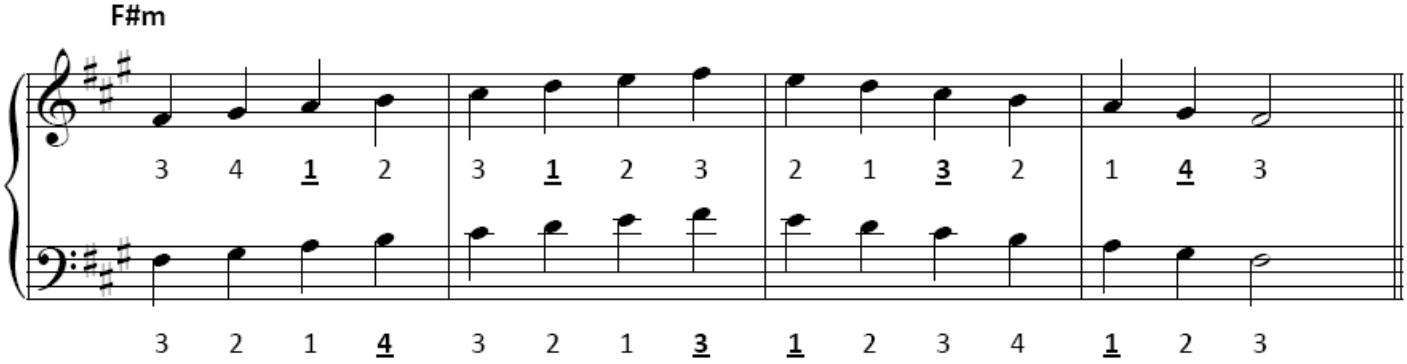
The RH for C# minor is an exception to the RH black key pattern.

C#m



The RH in F# minor is the only other exception to the RH black key pattern.

F#m

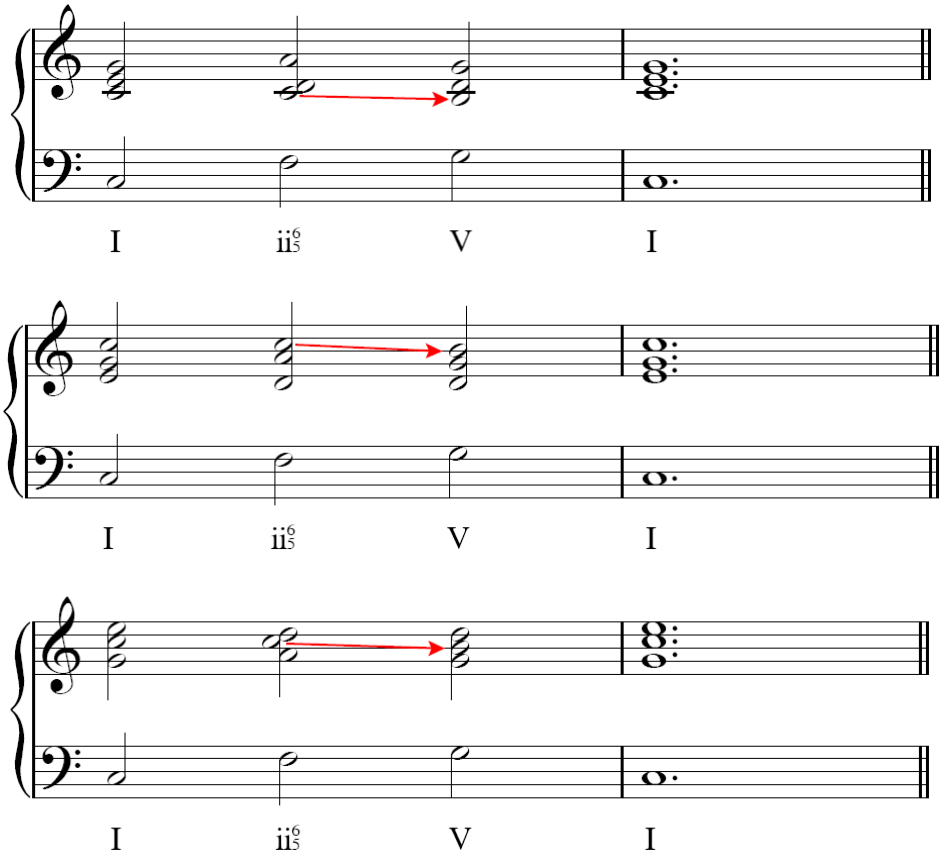


Harmonic minor: Raise the seventh scale degree a 1/2 step.
Melodic minor: Raise the sixth and seventh scale degrees a 1/2 step ascending, and lower them both (back to natural minor) descending.

I – ii$^{6}_{5}$ – V- I PROGRESSIONS

- **LH always plays $\hat{1}$, $\hat{4}$, $\hat{5}$ of the given key.**
- **RH starts on the three possible positions of the I triad: $^{5}_{3}$, $^{6}_{3}$, $^{6}_{4}$.**
- **Resolve the 7th of the ii$^{6}_{5}$ down to the leading tone.**
- Usually, one will play "close-position" triads in the right hand, or a dyad (two notes) when appropriate. Make sure that you are changing the ***chord position*** in the right hand as you move between chords. For example, if you are playing a I$^{6}_{4}$ in the right hand, the middle note (the root of I) will become the 7th in the ii$^{6}_{5}$. Maintain that note and change the other two to the nearest members of the ii$^{6}_{5}$.
- Remember that contrary motion prevents parallelisms. Don't move all parts in the same direction!
- If you can leave a note unchanged, leave it.

(Shown in the key of C – practice the RH first in other keys: *smooth transitions between positions are the secret!*)



1. **Attempt I–ii$^{4}_{3}$–V–I and I–ii$^{4}_{2}$–V^{6}–I using the same principles of 7th resolution.**
2. **Try them in the parallel minor.**

Method for Transposition of Melodies at the Keyboard

The most effective way to transpose melodies is to consider the tonal context of the melodic tones. Each one has an identity within the key. Once this is established, you can transfer these identities into a new tonal context.

1. Sing the melody on sol-fa syllables
2. Sing the melody on scale degree numbers
3. Sing the melody on letter names of the original key
4. Sing the melody on letter names of the new key
5. Attempt to play the melody in the new key

With practice it should be possible to remove steps in this process.

Another series of transposition exercises:

1. In tempo, say the letter names of the new key while looking at the original music. Adhere to the given rhythm and use a metronome. (This method is widely used by professional orchestral musicians.)
2. Play the melody in the original key singing …
    a. … the solfège names.
    b. … the scale degree numbers.
    c. … the letter names in the new key.

Practice melodies from ***Music for Sight-Singing*** **(Seventh Edition) Ottman/Rodgers** in order of difficulty:

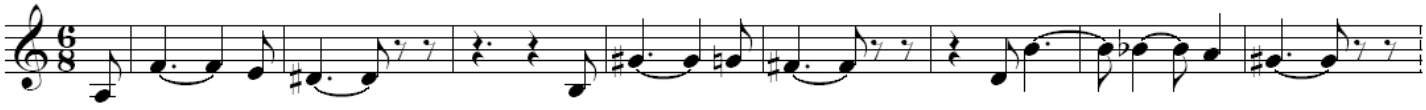
Melodies that proceed by step … **Chapters 2 and 3**.

Melodies that proceed by leaps related to the triad and the Dominant Seventh … **Chapters 4 through 12**.

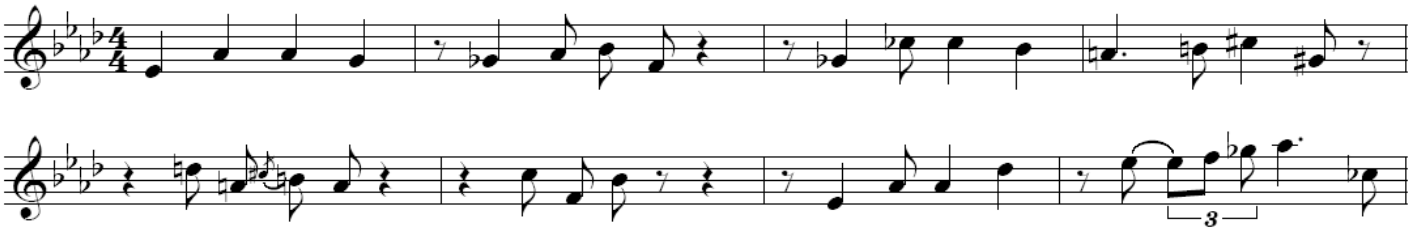
Melodies that modulate … **Chapters 13 and 14**.

Melodies that are highly chromatic are more difficult to transpose. In these cases transposition by interval can be more effective. Examples:

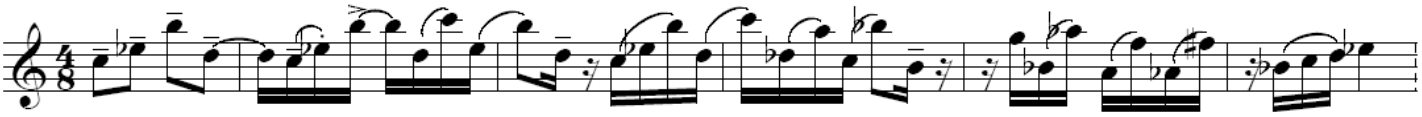
Prelude to *Tristan und Isolde* (Wagner)



Transfiguration from *Tristan und Isolde* (Wagner)



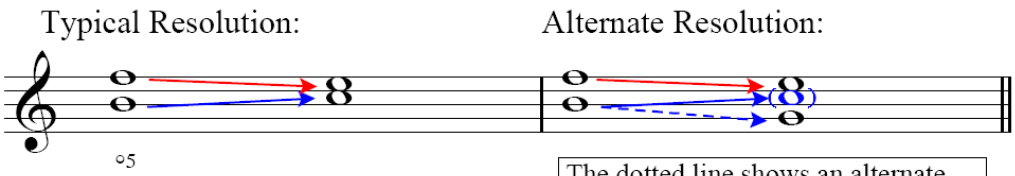
Movement II from *Symphony of Psalms* (Stravinsky)



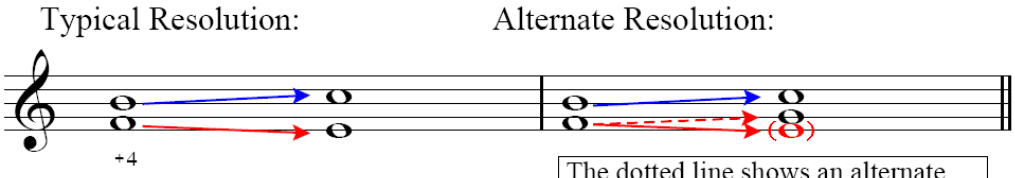
RESOLVING DOMINANT 7th CHORDS TO I OR i

First consideration … the tritone.

- Typically, the tritone in the dominant seventh chord (formed by the 7th and the 3rd) resolves outward when it is written as an augmented 4th, and resolves inward when it is written as a diminished 5th.
- Alternate resolutions are possible, as described below:

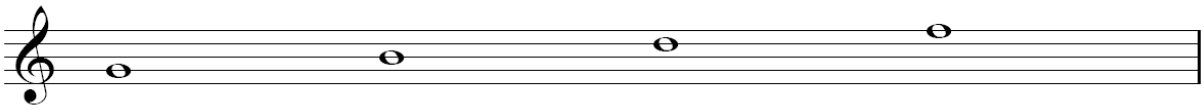


The dotted line shows an alternate resolution of the LT. This is allowed when another voice substitutes for the LT in resolving to the **root of the I chord**.



The dotted line shows an alternate resolution of the 7th. This is allowed when another voice substitutes for the 7th in resolving to the **3rd of the I chord**.

How to resolve a V7 to a I chord:



The **root**: keep this tone when moving to the tonic chord, unless it is in the bass. In that case, it should move to the root of the I chord.

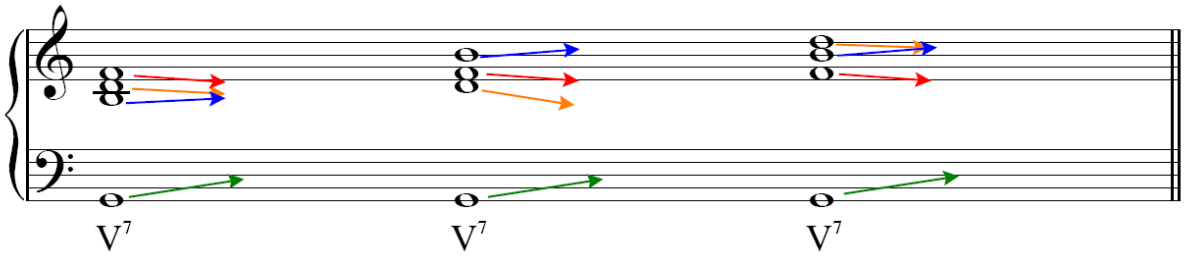
The **leading tone**: this tone usually resolves upward to the tonic. If another tone takes the tonic (a half step above the LT), the LT may take the 5th of the I chord.

The **fifth**: this tone is the free agent of the V7 chord. It may take the root of the I chord, or it may take the third. If the third is doubled, such as in the case of the V$^5_3$ chord, be sure that it occurs in contrary motion by step.

The **seventh**:this tone typically resolves down to the third of the I chord. Occasionally, the third of the I chord is taken by fifth of the V7 chord. In these cases the seventh may resolve to the fifth of the I chord, so long as the seventh is not in the upper-most voice.

- Usually, one will play "close-position" triads in the right hand, or a dyad (two notes) when appropriate. Make sure that you are changing the ***chord position*** in the right hand as you move between chords. For example, if you are playing a six-four chord in the right hand, it should be followed by a first inversion triad. If the bass note (your left hand) moves in contrary motion to the chord in your right hand AND you manage to change position, you will avoid parallelisms.
- Remember that contrary motion prevents parallelisms. Don't move all parts in the same direction!
- If you can leave a note unchanged, leave it.

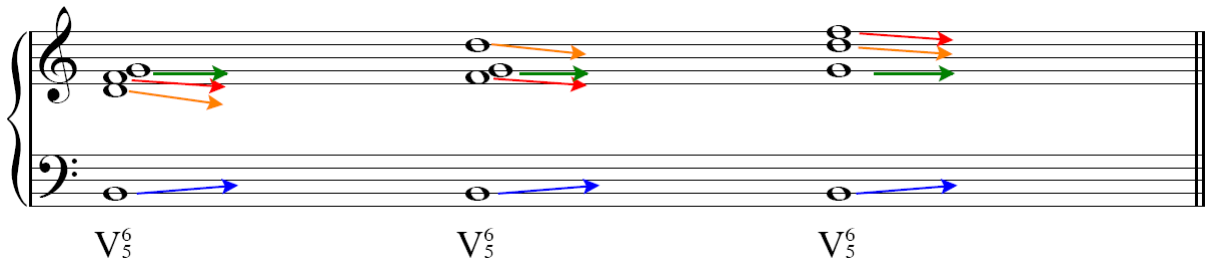
Root position, V7 (shown in the key of C):



General rules for resolving the V7:

- Resolve the dissonant elements—the tritone between the 3rd and 7th of the chord—according to their natural tendencies:
  - The **7th** of the V7 chord resolves down by half step.
  - The **3rd** of theV7 chord resolves up by half step to the tonic, since it is the leading tone.
- The **root** of the V7 chord takes the root of the tonic chord.
- The **5th** of the V7 chord moves to the nearest tonic chord tone, only doubling the third in contrary motion by step.
- Since the rules above produce a tonic chord with irregular doubling (3 roots, 1-3rd, and no 5th), the 3rd of the V7 (LT) may skip downward to take the 5th of the tonic chord rather than resolving naturally, in order to produce a complete tonic chord. This involves the *alternate resolution* of the tritone.

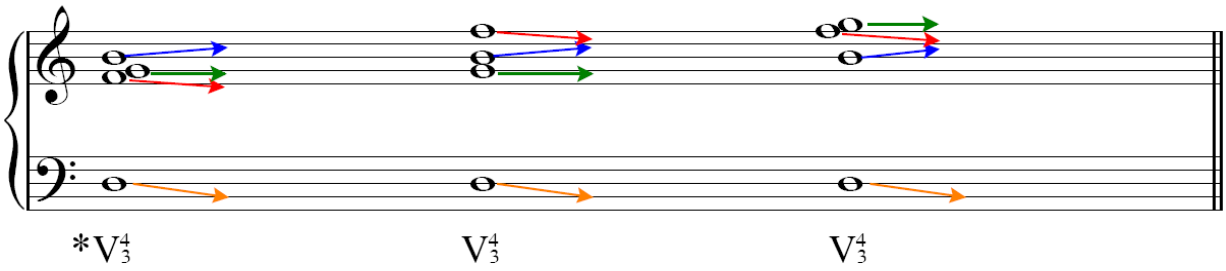
First Inversion, V^6_3 (shown in the key of C):



General rules for resolving the V^6_5:

- The **3rd** –the leading tone--appears in the bass, intensifying its natural tendency to resolve upward to the tonic. Thus in first inversion, the 3rd nearly *always* resolves up to the tonic.
- The **7th** still resolves down by step, to take the 3rd of the tonic chord.
- The **root** stays on the same pitch, taking the 5th of the tonic chord.
- The **5th** moves down to double the tonic.

Second Inversion, V^4_3 (shown in the key of C):

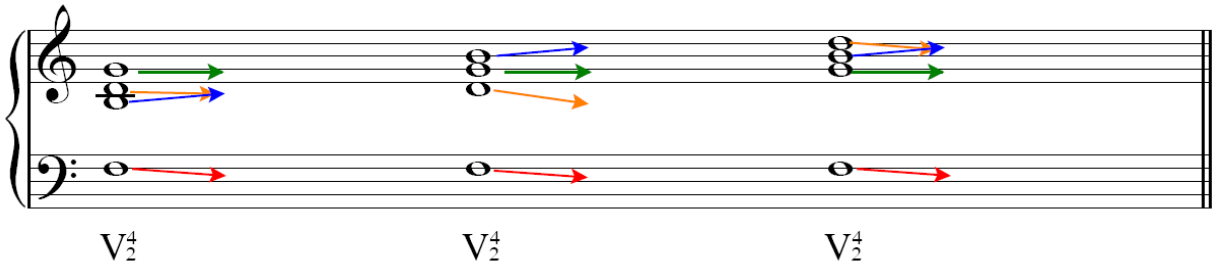


* The second inversion dominant seventh may resolve to a first inversion tonic chord.

General rules for resolving the V^4_3:

- The V^4_3 is a relatively weak chord, often used as a passing chord (similar to a passing six-four).
- The **7th** moves down by step as usual to take the 3rd of the tonic chord.
- The **3rd**, the leading tone, moves up by step to the tonic and to resolve the tritone.
- The **root** stays on the same pitch, taking the 5th of the tonic chord.
- The **5th**, now in the bass, moves down to double the tonic, or it may move up to double the third, but only in contrary motion by step.

Third Inversion, V_2^4 (shown in the key of C):



General rules for resolving the V_2^4:

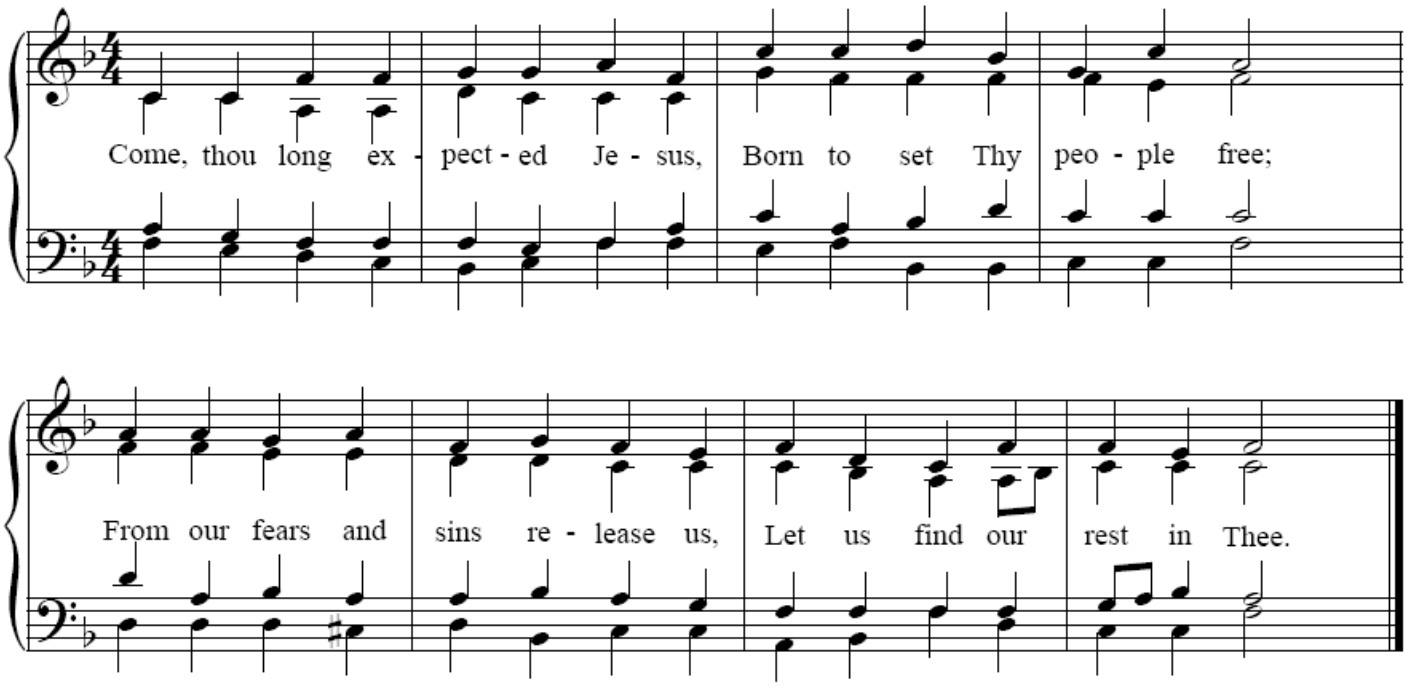
- The **7th** is now in the bass, intensifying its tendency to resolve downward. Thus in second inversion, the 7th nearly always resolves downward and takes the 3rd of the tonic chord (I^6).
- The **3rd**, the leading tone, resolves upward to the tonic.
- The **root** stays on the same pitch, taking the 5th of the tonic chord.
- The **5th** moves down to double the tonic.
- The result is a I^6 chord.
- Since the 3rd is in the bass, take care not to double the 3rd except in contrary motion by step.

NB: These resolutions are applicable to the minor as well as to the major.

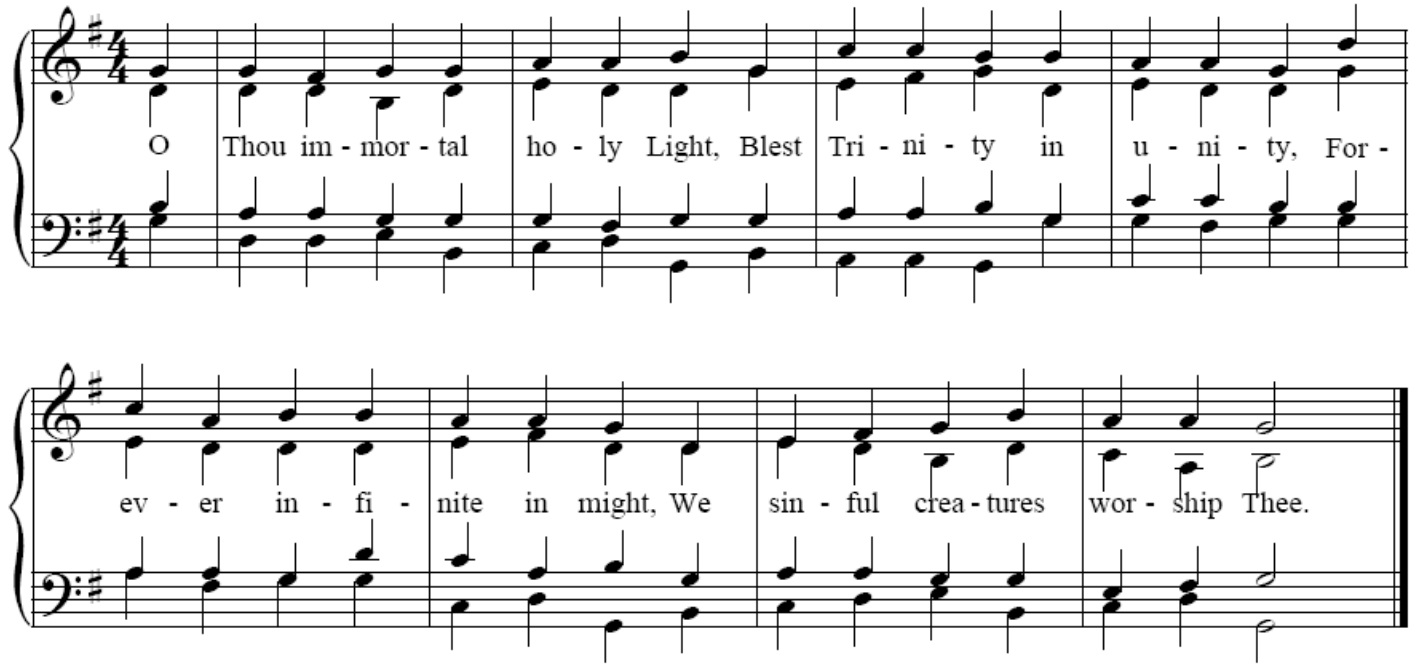
HYMNS for Part-Singing

and Transposition

Come, Thou Long Expected Jesus



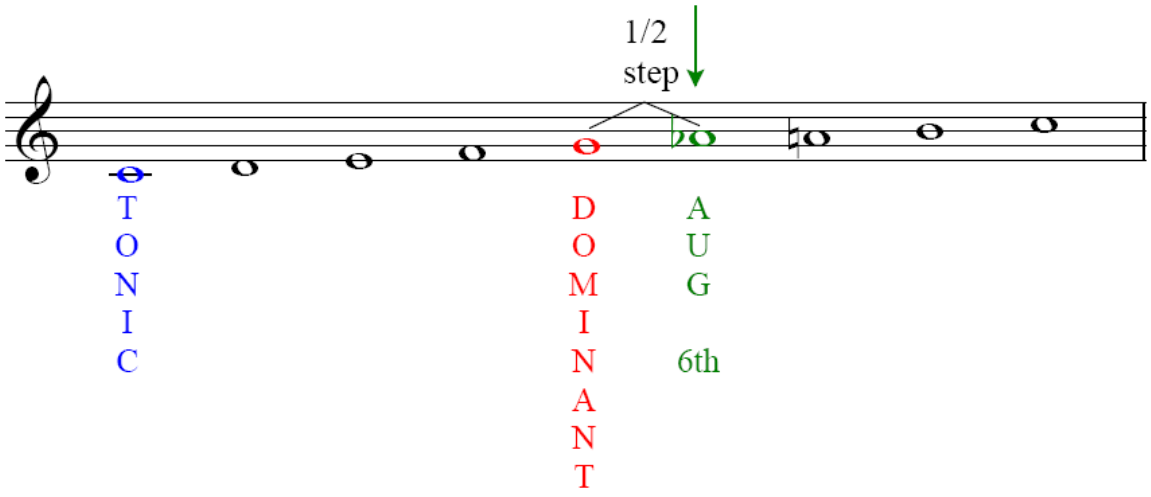
O Thou immortal holy Light



Resolving Close-Position Augmented 6th Chords at the Keyboard

First Considerations:

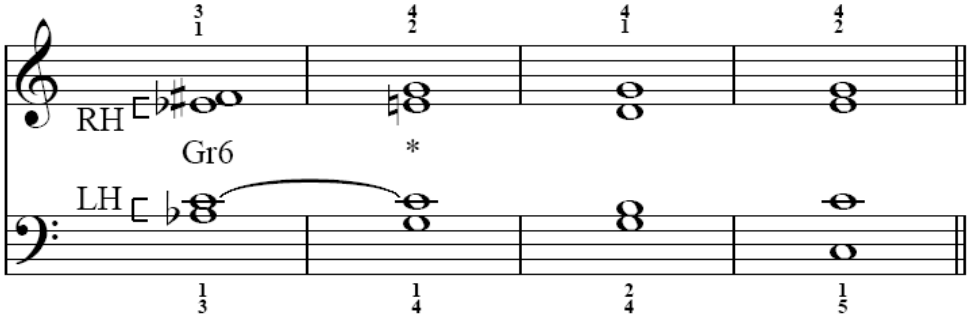
1. Augmented 6th chords should be considered **pre-dominant** harmonies. They always precede the dominant itself, or its occasional stand-in, the cadential I^6_4 chord. (Remember that the I^6_4 always resolves to the dominant.)
2. These chromatic chords usually resolve by step.
3. They always contain the same tritone as the V^7/ V chord. The resolution of this tritone is paramount.
4. All Augmented 6th Chords are built a half-step above the dominant:



Forming and resolving the German 6th at the keyboard (close position; note that in the close position, the German 6th must resolve to the I^6_4 to avoid parallel octaves):

$$Gr^6 — I^6_4 — V$$

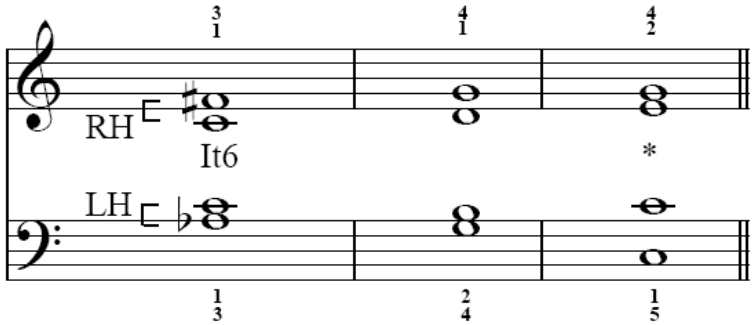
1. Place LH 3rd finger a half-step above the dominant in whatever key you are operating. Build a dominant seventh chord above this tone using the LH thumb, the RH thumb, and the RH 3rd finger. (Note that the minor "seventh" we create here is respelled as an augmented sixth in the German Sixth).
2. Resolve the Gr^6 to the I^6_4 chord. The augmented 6th (LH 3, RH 3) resolves to an octave while the fifth resolves to the 3rd of the tonic triad by step. The third of the Gr^6 remains unchanged. Note that in the minor, only the augmented 6th resolves to the octave to form the i^6_4 chord.
3. Resolve the I^6_4 to the V. The interior pair of pitches resolve downward by step to the dominant, the outer parts retaining the octave.



Forming and resolving the Italian 6th at the keyboard (close position):

$$\text{It}^6 \text{—} \text{V}$$

1. Place LH 3rd finger a half-step above the dominant in whatever key you are operating. Build a dominant seventh chord above this tone omitting the fifth. Use LH thumb on the third, the RH 3rd finger on the seventh. (Note that the minor "seventh" we create here is respelled as an augmented sixth in the Italian Sixth).
2. Resolve the It^6 to the V chord. The augmented 6th (LH 3, RH 3) resolves to an octave while the interior tone (which we may presume is doubled) resolves both upward and downward by step to form the dominant.

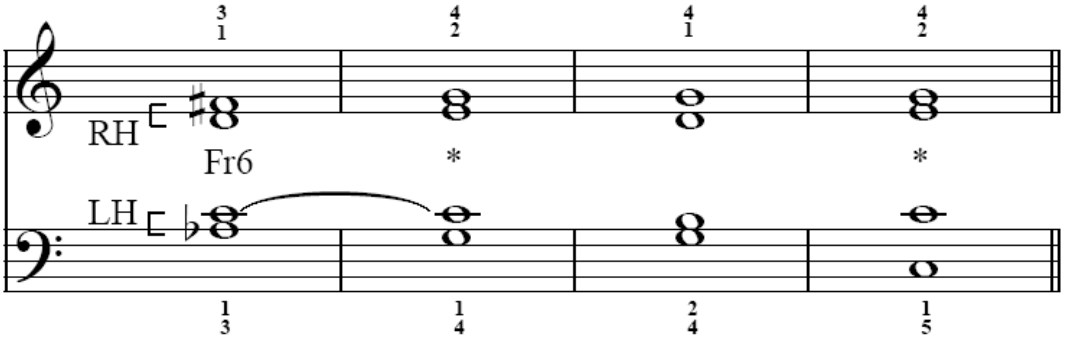


Forming and resolving the French 6th at the keyboard (close position; depending on which tone remains common, this chord can resolve to either the I^6_4 or the V):

$$\text{Fr}^6 \text{—} \text{I}^6_4 \text{—} \text{V}$$

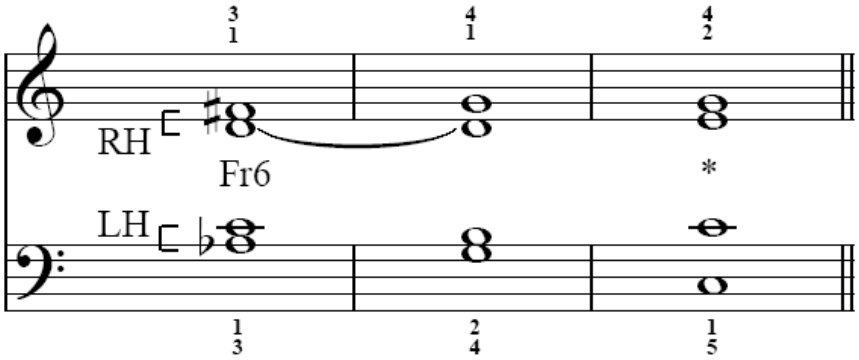
1. Place LH 3rd finger and LH thumb on a major third built a half-step above the dominant in whatever key you are operating. Place your RH thumb and RH 3 on another major third a whole-step above your LH thumb.

2. Resolve the Fr^6 to the I^6_4 chord. The augmented 6th (LH 3, RH 3) resolves to an octave while the RH thumb resolves to the 3rd of the tonic triad by step. The thumb in the LH remains unchanged.
3. Resolve the I^6_4 to the V. The interior pair of pitches resolve downward by step to the dominant, the outer parts retaining the octave.



Fr^6— V

1. Place LH 3rd finger and LH thumb on a major third built a half-step above the dominant in whatever key you are operating. Place your RH thumb and RH 3 on another major third a whole-step above your LH thumb.
2. Resolve the Fr^6 to the V chord. The augmented 6th (LH 3, RH 3) resolves to an octave while the LH thumb resolves to the 3rd of the dominant triad by step. The thumb in the RH remains unchanged.



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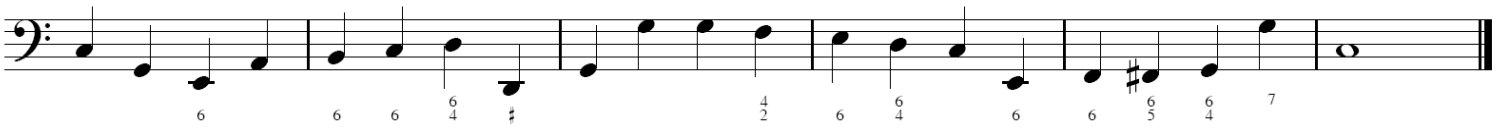
Figured Bass Realization

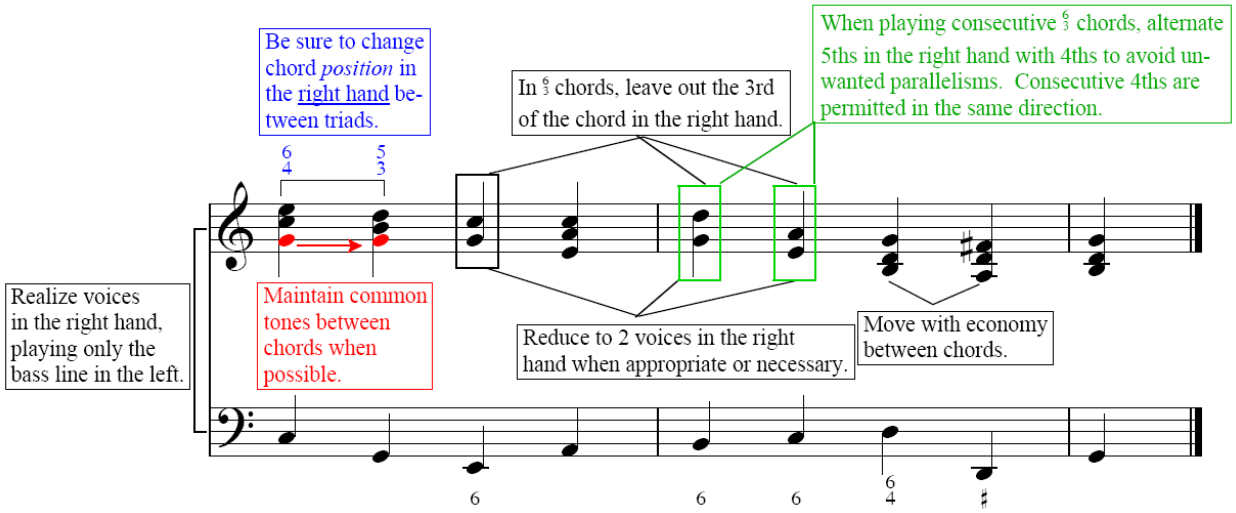
Figured bass realization requires fluency in the harmonic language of the Common Practice Period. After that, practice and the experience that comes with it are the basis of proficiency in this skill. Never the less, there are several things to keep in mind when attempting a realization.

1. Realize in two or three voices in the right hand, while playing the bass line only in the left.
2. Remember to alter the position of triads/seventh chords in the right hand when moving from one figure to the next. (If you are in a $\frac{6}{4}$ in one chord, shift to a $\frac{5}{3}$ position in the next).
3. Preserve common tones between chords.
4. Move economically between hand positions in the right hand. Avoid large leaps with the hand.
5. Consider contrary motion against the left-hand bass line with the right hand.
6. In $\frac{6}{3}$ chords, omit the third of the chord in the right hand.
7. In consecutive $\frac{6}{3}$ chords, alternate between fifth and fourth (or fourth and fifth) in the right hand, or simply use consecutive parallel fourths.

Sample figured bass:

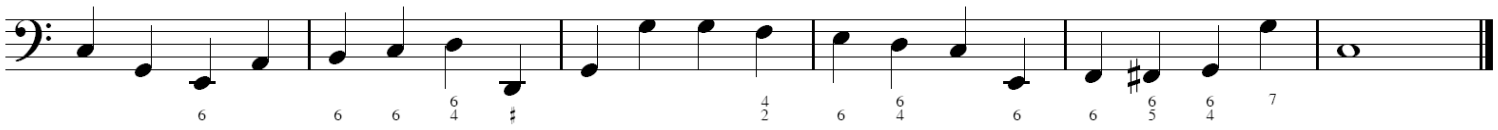


A figured bass "anatomy" of the first bars …

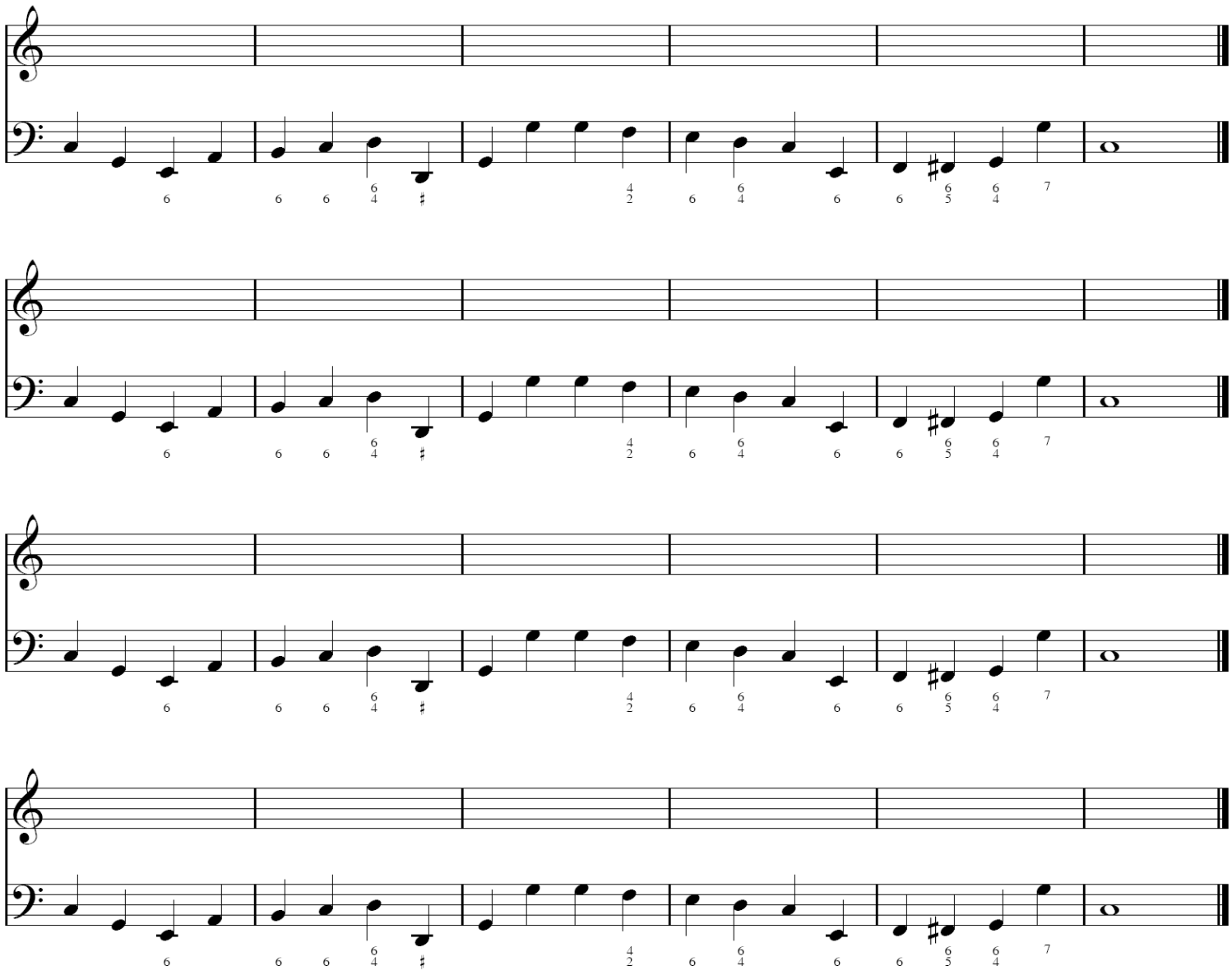


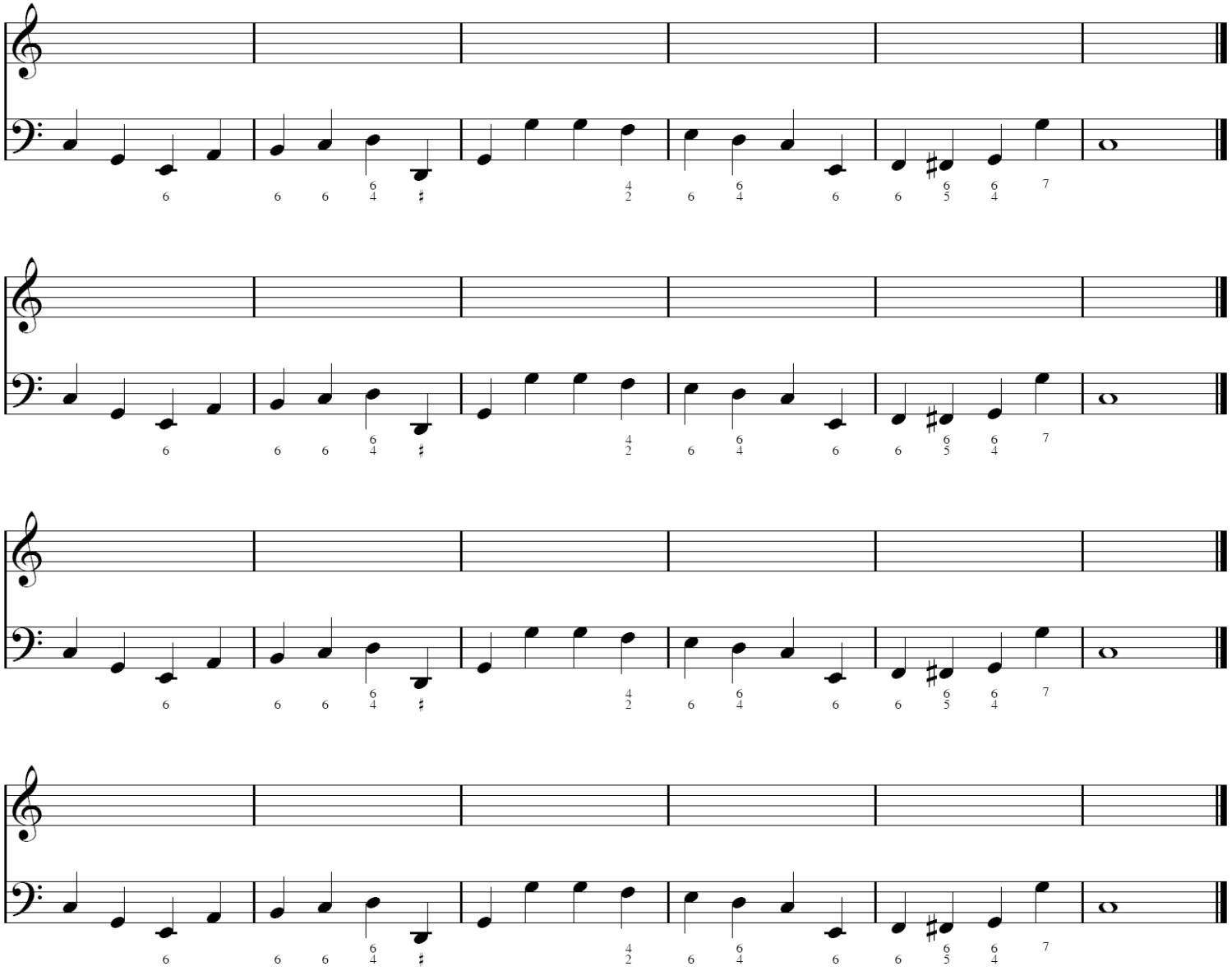
Please see the full realization on page 22. Use the blank staff versions to work out alternate realizations. After working out a few possible realizations, **always practice using JUST THE FIGURED BASS LINE.**

Figured bass realization

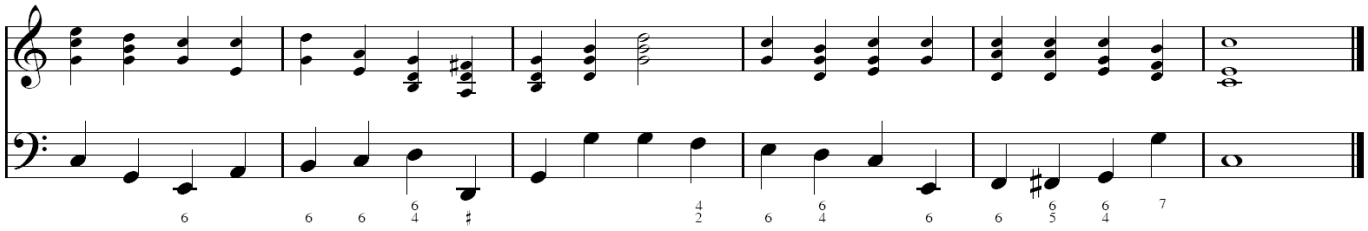


Work-staves for figured bass





One possible solution … every voicing decision will have consequences in subsequent decisions, hence, the variety of possible realizations.

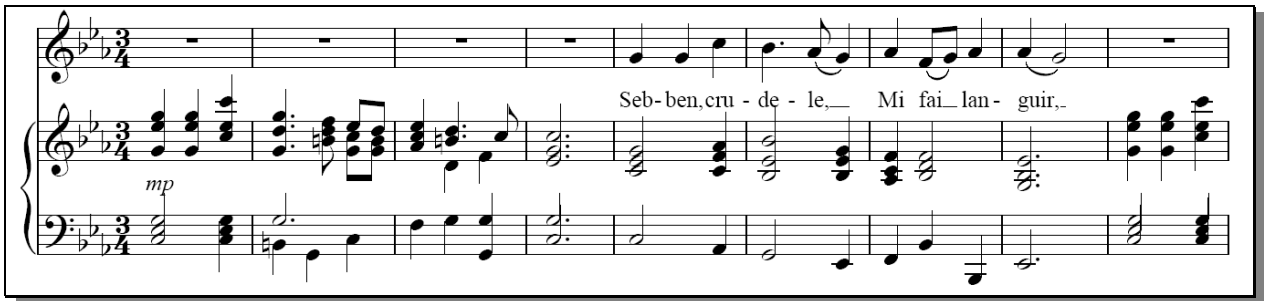


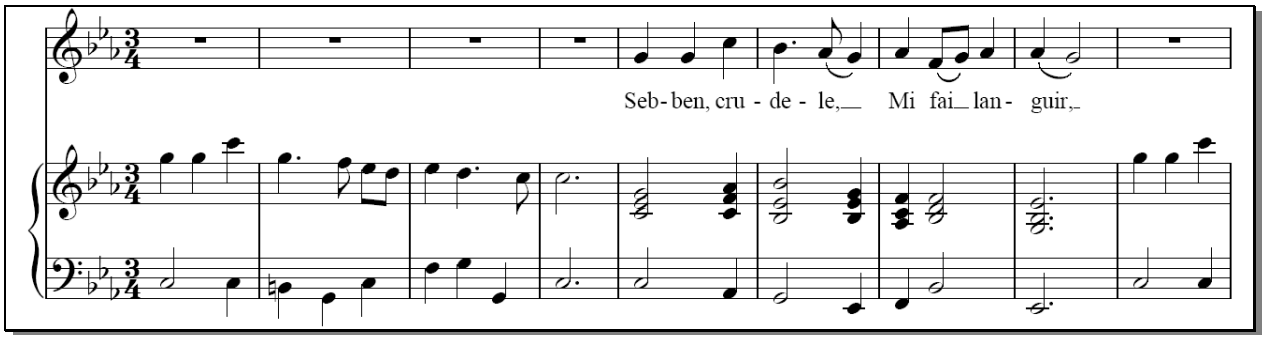
Accompaniment Reduction

There are a few principles by which piano accompaniments can be reduced to make them more playable by singers and other musicians who may have need to create a rudimentary accompaniment for themselves or others.

1. Identify those parts that can be left out
    a. Octave doublings
    b. Inner voices
    c. Complicated figurations
    d. Simply moving parts to chordal elements
2. Learn to 'distill' the harmonic content out of the accompaniment
    a. To do this, you must have relative facility in identifying harmonic content in an accompaniment
    b. Play the uppermost and lowermost notes, providing a simple melodic and harmonic framework, especially in introductions and interludes
    c. Play chords to support the soloist – don't get in the way with too much more than a harmonic context

Compare to the two passages below:





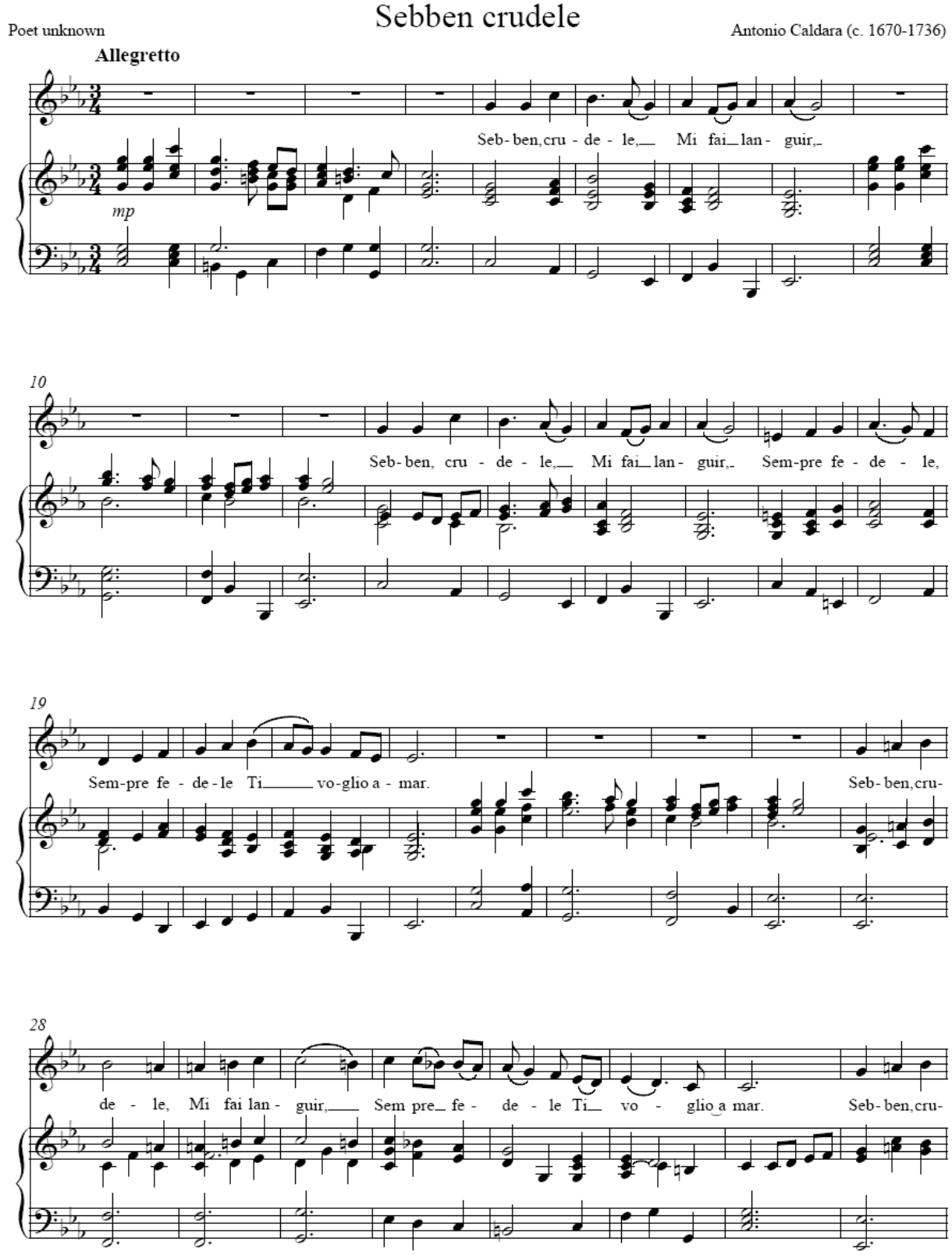
Here we notice several things:

- Octaves were eliminated
- The outer voices alone provide the introductory and bridge material of the accompaniment
- Unnecessary movement in the bass is simplified

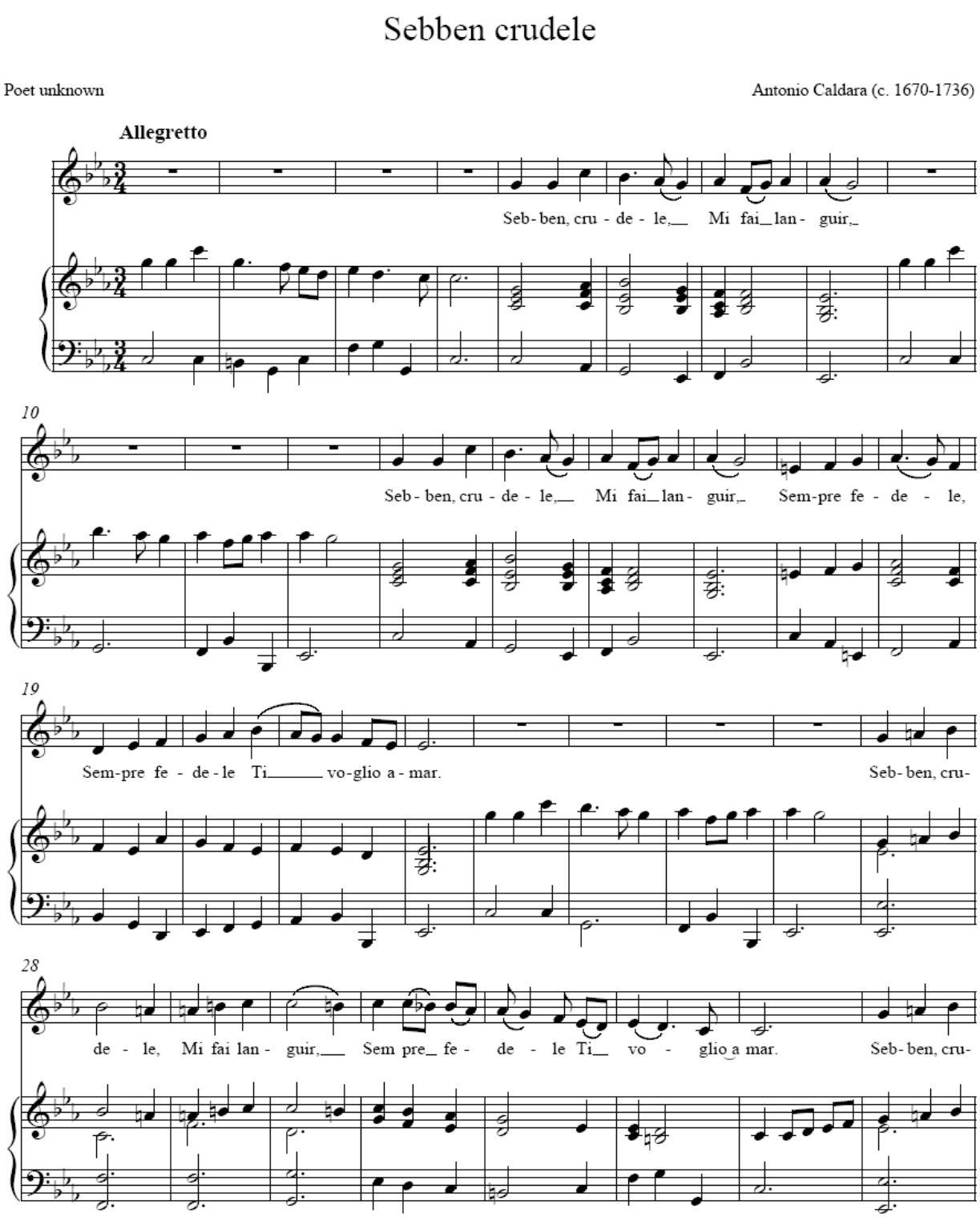
In several of these measures, simply the right hand can provide enough foundation to support singing. Please see the appendix which includes a side-by-side comparison of *Sebben, crudele* in both its full form and a reduced version.

Attempt a similar reduction on a work of your choosing. Consider a piece from a different period and try for a similarly practicable simplification.

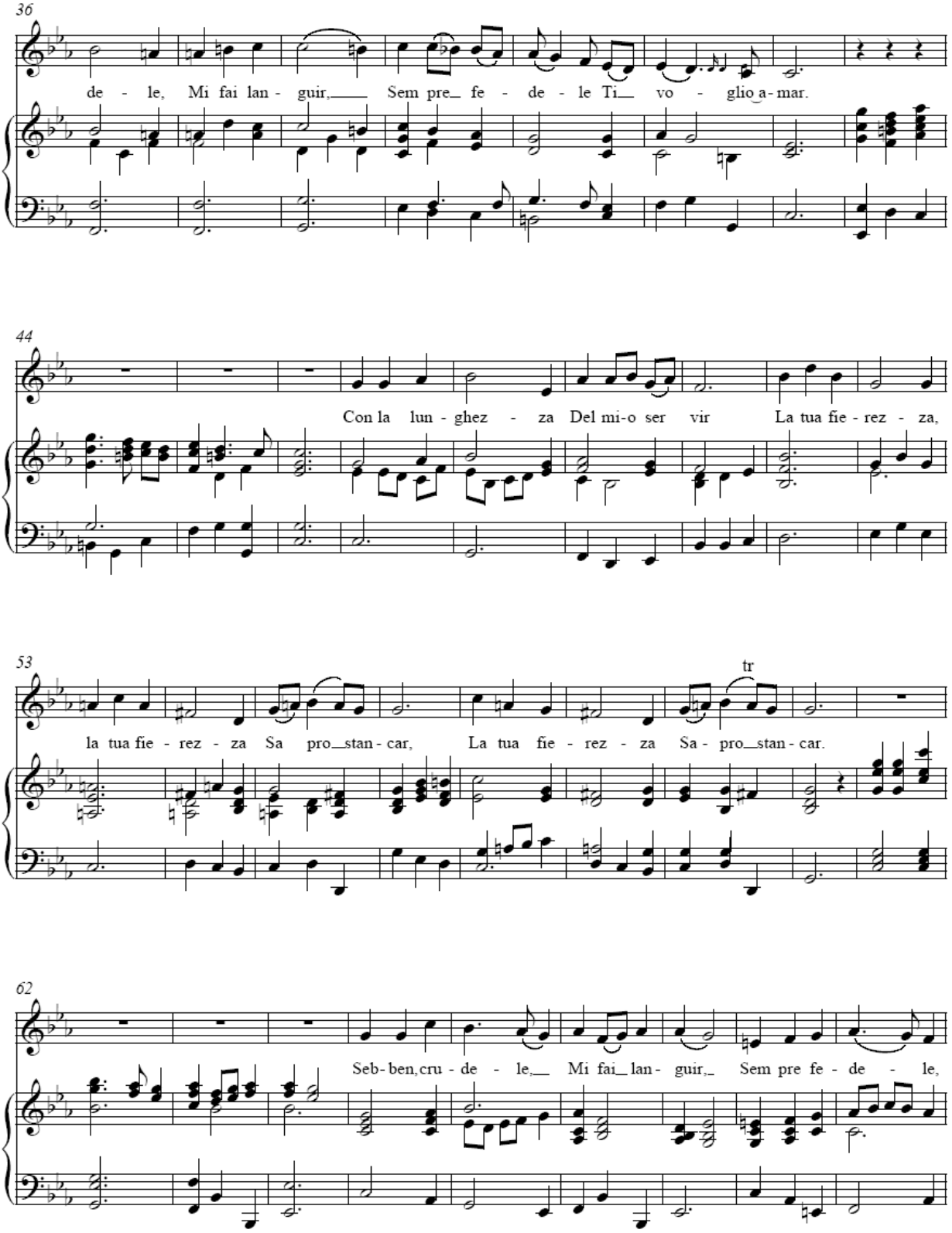
Original Version P.1



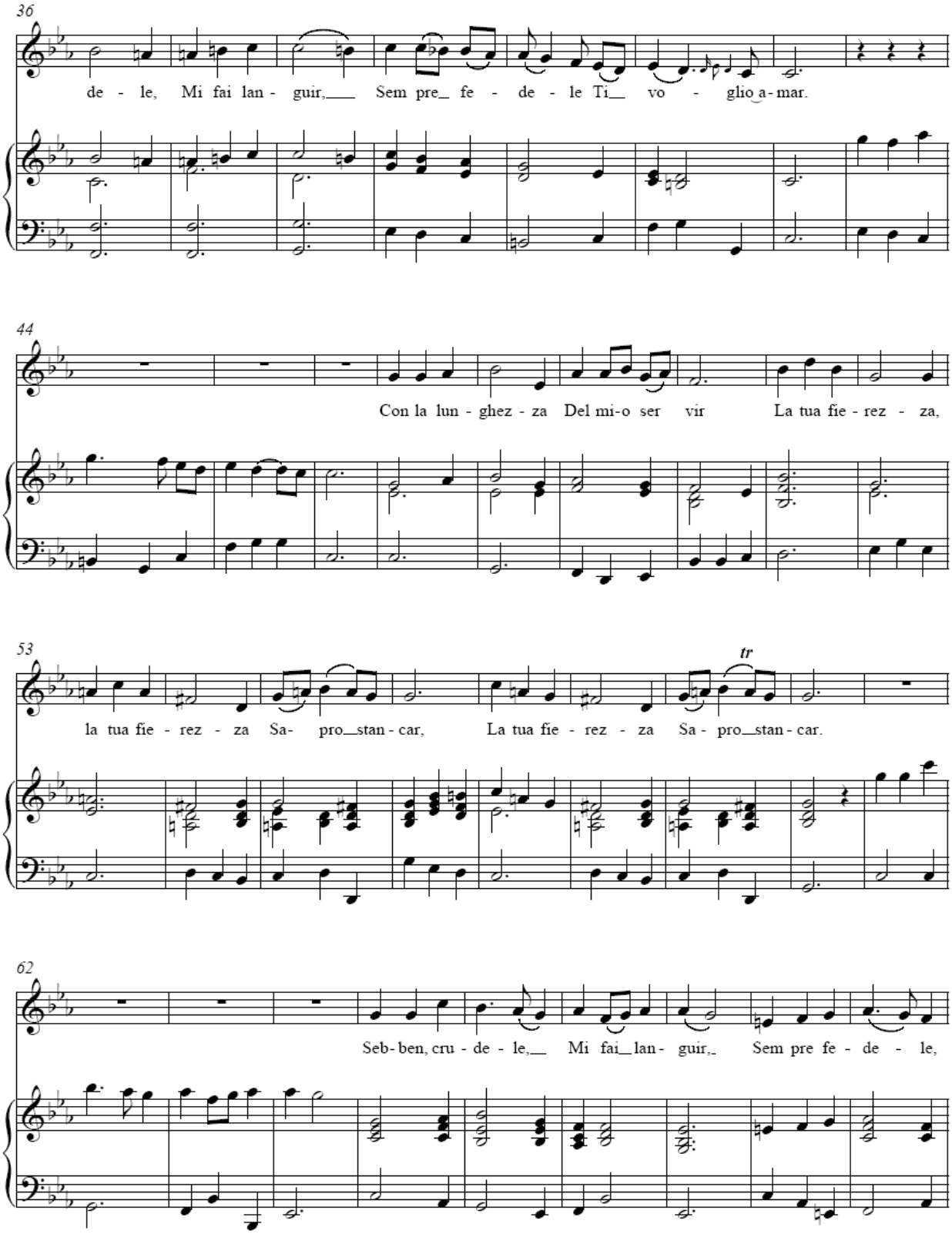
Reduced Version P.1



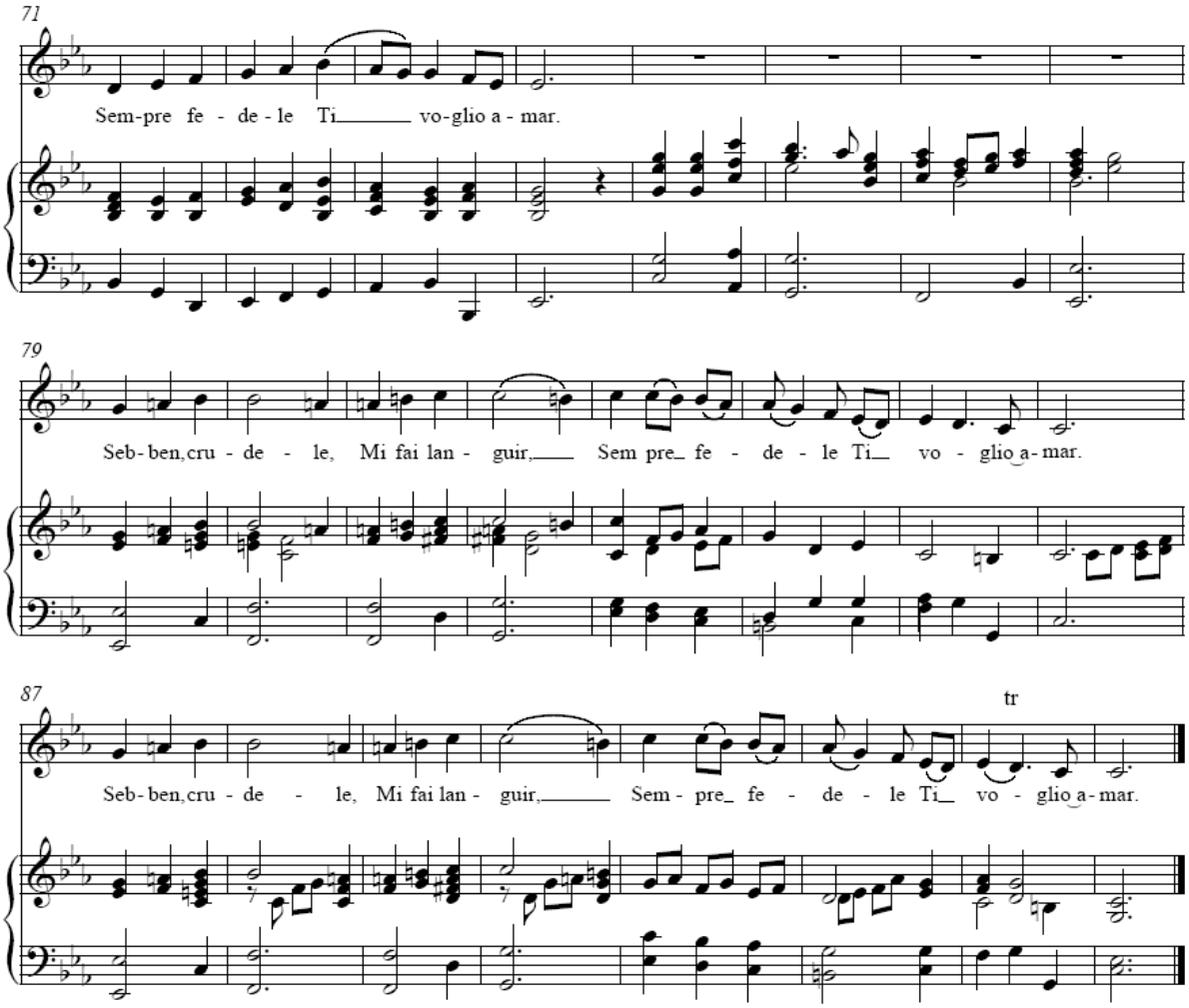
Original Version P.2



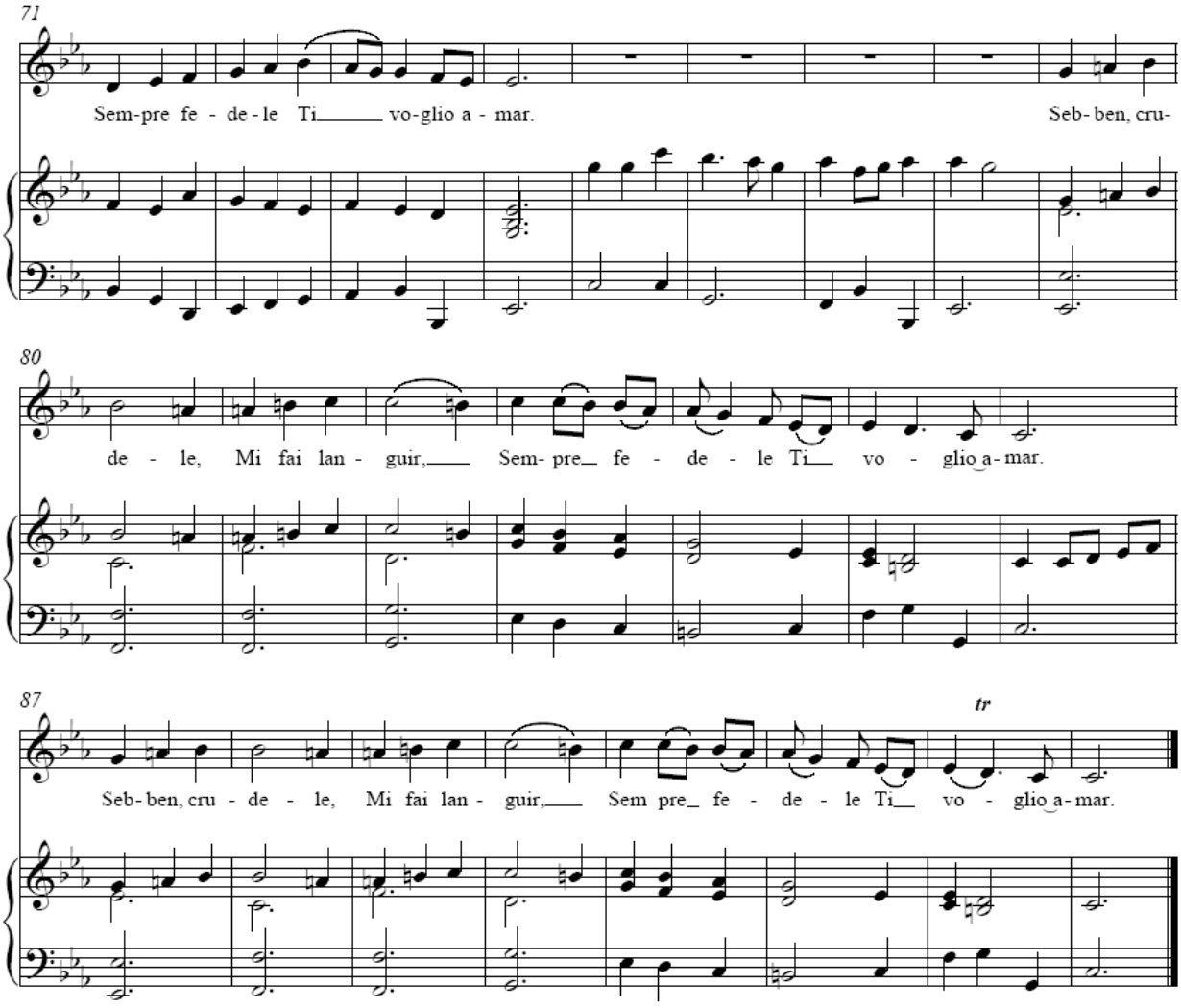
Reduced Version P.2



Original Version P.3



Reduced Version P.3



Appendix: Songs for reduction practice