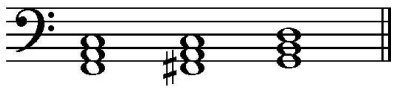
An Alternative Approach to Teaching the vii°/V in Major and Minor Keys

Dr. Paula J. Telesco

Spelling secondary leading tone triads is often a stumbling block for students, particularly in minor keys. Understanding the diatonic basis of these chords is crucial for understanding how these secondary chords function, and there are several ways to approach this, the most common of which is to view the chord as diatonic in the temporarily tonicized key. I have taught these chords this way for many years. However, thinking in a temporary key can initially be difficult for many students, as they have to juggle several keys and key signatures in their head simultaneously. To take what is probably the easiest example, if one is asked to spell a vii°/V in C major, one first must determine the key of V (G), consider the key signature of G (F♯), then think of the vii° in the key of G (f♯°). While some students have no problem keeping the two keys and key signatures straight, others have a great deal of difficulty. The difficulty only increases when keys have multiple sharps or flats.

An alternative or additional way to teach these chords is as altered diatonic chords in the original key. If the vii°/V in C is viewed as an altered IV chord, it eliminates the confound of thinking in two different keys. By raising the root of the IV chord by a chromatic semitone, from $\hat{4}$ to $\sharp\hat{4}$ (F to F♯ or *fa* to *fi*), one has created the vii°/V, turning a major triad into a diminished one.[1] This method has the advantage of making explicit the connection between the IV and vii°/V chords: both are predominant-function chords progressing to V. Students can see how the vii°/V has the stronger tendency to progress to V than does the IV chord, because $\sharp\hat{4}$ (F♯) acts as a leading tone to $\hat{5}$ (G); as such, this ascending half-step motion, $\sharp\hat{4}$–$\hat{5}$ (F♯–G, *fi–sol*), provides greater impetus than does the whole step motion of $\hat{4}$–$\hat{5}$ (F–G, *fa–sol*). Making students aware of this important tonal movement, $\hat{4}$–$\sharp\hat{4}$–$\hat{5}$, also helps set the stage for the teaching of augmented sixth chords (with $\hat{4}$ in an upper voice, typically the soprano, moving to $\sharp\hat{4}$, against $\flat\hat{6}$/$\downarrow\hat{6}$ in the bass). Similarly, this movement of $\hat{4}$–$\sharp\hat{4}$–$\hat{5}$ provides the bass movement for another chromatic subdominant to dominant chord progressions: N^6–vii^{o7}/V–V.

When the primary key is major, only one alteration is needed to change IV into vii°/V—raise the root of IV from $\hat{4}$ to $\sharp\hat{4}$ (*fa* to *fi*), as shown below:



C: IV vii°/V V

[1] Raising the root of any major triad turns it into a diminished triad, and therefore potentially the vii° of some other secondary key.

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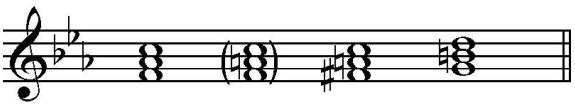
When the primary key is minor, two alterations are necessary: one must raise both the root of iv (4̂ to ♯4̂ or *fa* to *fi*) and the third of iv (↓6̂ to ↑6̂ or *le* to *la*). For those students who have more difficulty with minor keys than major, there is an additional intermediary step they can take (shown below):

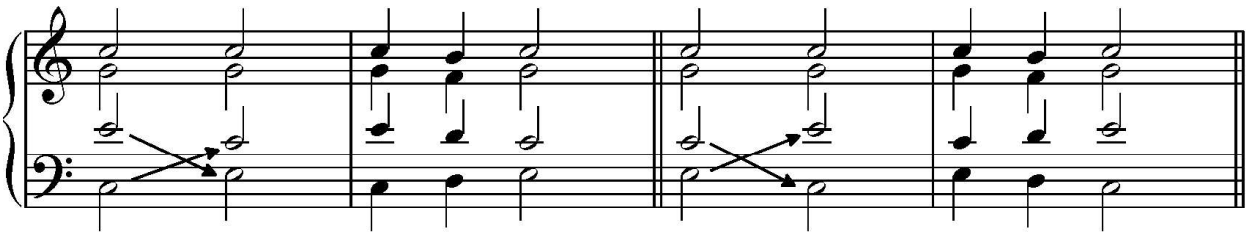
1. notate the minor iv chord
2. raise the third from ↓6̂ to ↑6̂ to create a major IV (the subdominant from the parallel major key)
3. raise the root from 4̂ to ♯4̂:



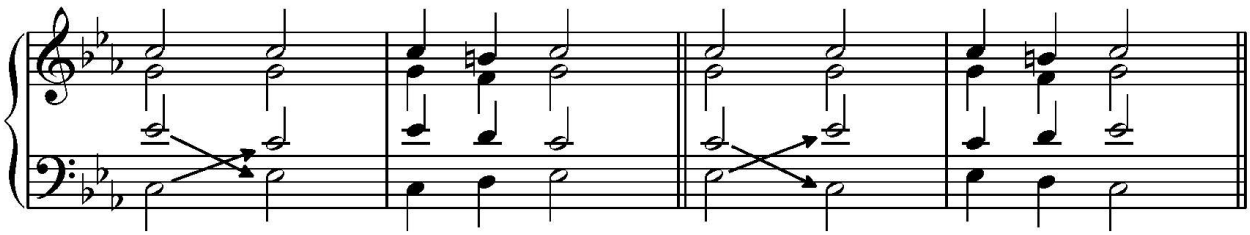
c: iv (IV) vii°/V V

For students who are more proficient, this method can be used as a way to double check their work.

The vii°/V, like the diatonic vii°, is typically used in first inversion as a passing chord to provide smoother voice leading from one chord to the next. Although the attached worksheets do not require any part-writing, I have provided some examples below for the convenience of the instructor, to show how idiomatic uses of vii°/V are derived from the diatonic progression, I–vii°6–I6. This progression connects a root position tonic with its first inversion and often involves a voice exchange between two voices, with the other two voices moving by step, as shown below:



C: I I6 I vii°6 I6 I6 I I6 vii°6 I



c: i i6 i vii°6 i6 i6 i i6 vii°6 i

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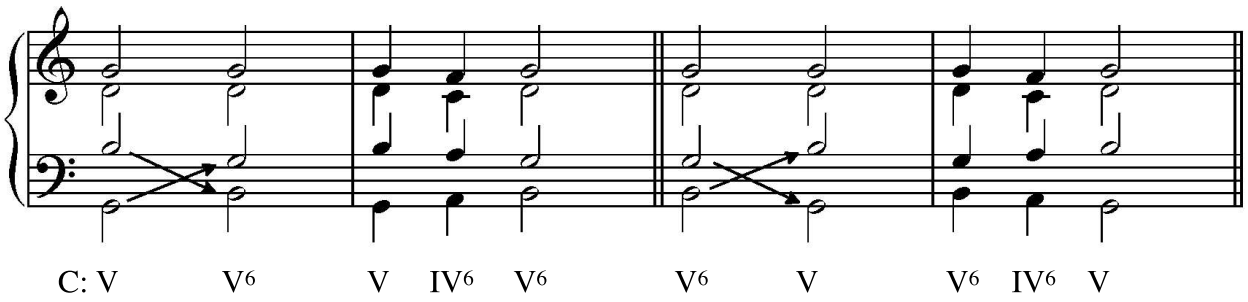
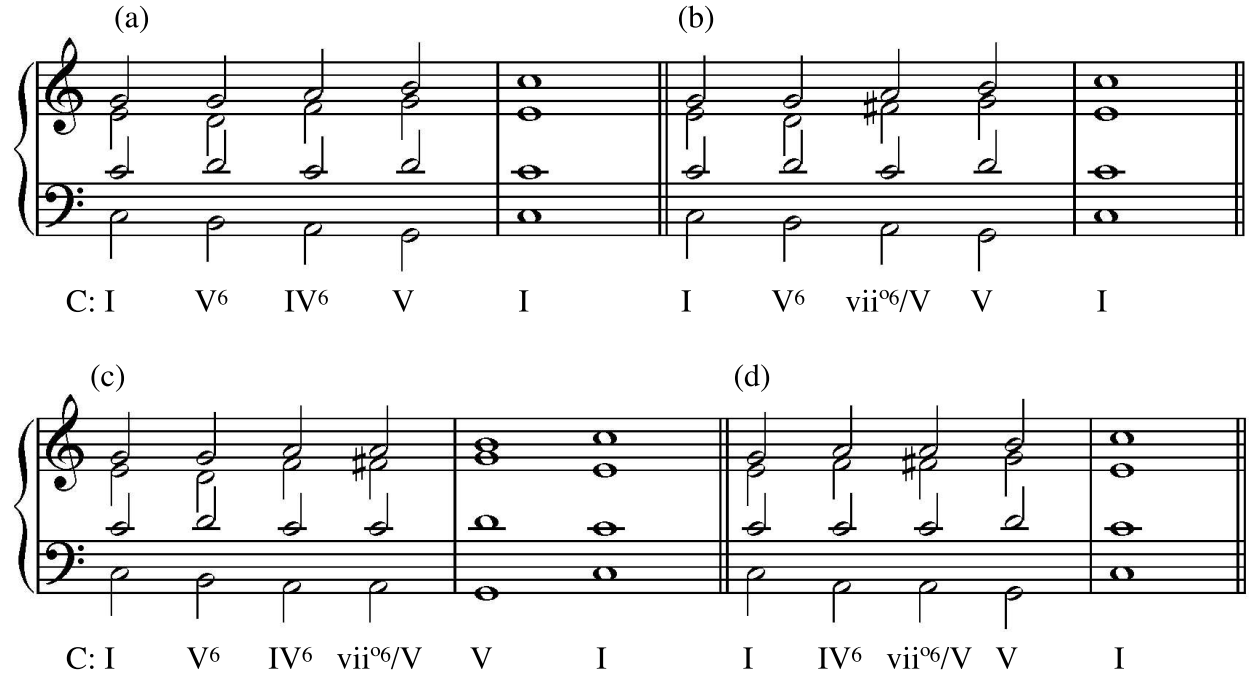
In similar fashion, the IV^6 chord can function as a passing chord between V and V^6, as shown below:



By raising $\hat{4}$ to $\sharp\hat{4}$, IV becomes vii°/V, which can then follow the IV triad, providing the strong $\hat{4}$–$\sharp\hat{4}$–$\hat{5}$ (*fa–fi–sol*) motion discussed above. The examples below show the derivation of the vii°^{6}/V from the diatonic V^6–IV^6–V progression:[2]

(a) IV^6 as a passing chord between V^6 and V
(b) vii°^{6}/V substituting for IV^6 as a passing chord between V^6 and V
(c) vii°^{6}/V following IV^6, both passing between V^6 and V
(d) vii°^{6}/V following IV^6 in an incomplete passing motion between V^6 and V



[2] I have not included minor-key examples because in all but the last example, other than major versus minor tonics, they would be otherwise identical: in a minor key, all the IV chords would have to be major in order to avoid the +2nd that would occur between ↑$\hat{7}$ and ↓$\hat{6}$ if the minor iv chord were used.

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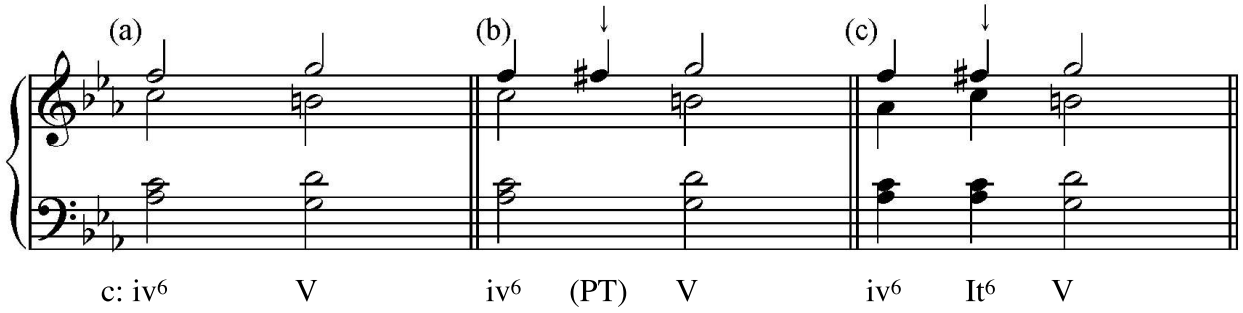
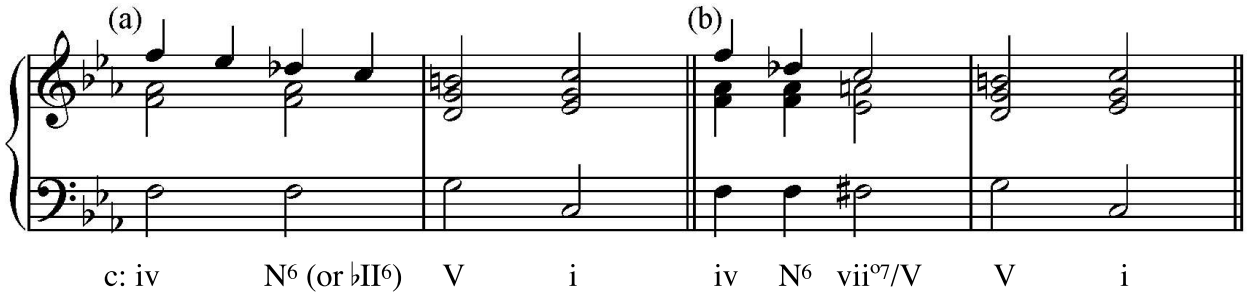
I have also included below examples with the augmented 6th and Neapolitan 6th chords, to highlight the $\hat{4}$–$\sharp\hat{4}$–$\hat{5}$ movement in each progression:

I. Derivation of augmented sixth chords (note contrary motion of $\hat{4}$–$\sharp\hat{4}$–$\hat{5}$ in an upper voice against $\flat\hat{6}$/$\downarrow\hat{6}$–$\hat{5}$ in the bass, expanding outwards):
   (a) Phrygian Half Cadence;
   (b) Phrygian Half Cadence with Chromatic PT ($\sharp\hat{4}$/*fi*);
   (c) Phrygian Half Cadence with augmented 6th chord (Italian 6th)



II. Neapolitan 6th chord (note contrary motion of $\hat{4}$–$\sharp\hat{4}$–$\hat{5}$ in the bass voice against $\flat\hat{2}$–$\hat{1}$–$\uparrow\hat{7}$ in the soprano, contracting inwards):
   (a) N^6 progressing directly to V: $\hat{4}$–$\hat{5}$ (*fa–sol*) in the bass
   (b) N^6 progressing first to vii^{o7}/V, then to V: $\hat{4}$–$\sharp\hat{4}$–$\hat{5}$ (*fa–fi–sol*) in the bass



Finally, although the student handout and worksheet exercises do not address these augmented 6th and Neapolitan 6th progressions, nor any other secondary leading tone triads, one could teach the other secondary leading tone triads in the same way as the vii°/V, as chromatic alterations of diatonic chords. This approach has the benefit of focusing on chromatic half-step motion and allowing students to see how chromaticizing diatonic chords can be used in a multitude of interesting chord progressions, as shown below:[3]

[3] Of course, the spellings of other secondary leading tone chords require different chromatic alterations, as shown below.

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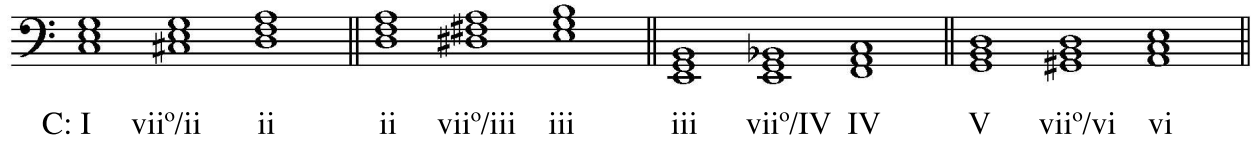
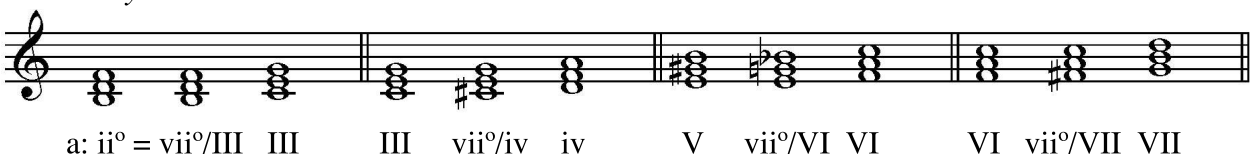
Major Keys



Minor Keys



The exercises that follow below ask students to notate the vii°/V chords in root position only, in order to highlight the movement of $\hat{4}$–$\sharp\hat{4}$–$\hat{5}$. There are two sets of exercises, each in two parts (major keys, followed by minor keys). They are laid out in two different ways, so instructors may choose their preferred approach:

1. In the first set of exercises, each example ascends by step from the previous example, through all the white note keys, and then through the black note keys. This systematic approach has the advantage of allowing students to adjust their thinking by moving everything up one step at a time. It is particularly helpful if students are looking at a keyboard when they do these, whether a diagram, or a real keyboard. A virtual keyboard is also very helpful—here is a link to one free version: https://virtualpiano.eu/
2. The second set of exercises is a rearrangement of the first group, for instructors who prefer to progress through the circle of fifths. This of course has the benefit of reinforcing circle-of-fifths relationships.

Answer keys are provided for each set of exercises. These exercises can be done in class or assigned, or both. Students can notate their answers on the provided worksheets, or create their answers in a free notation program like Noteflight.

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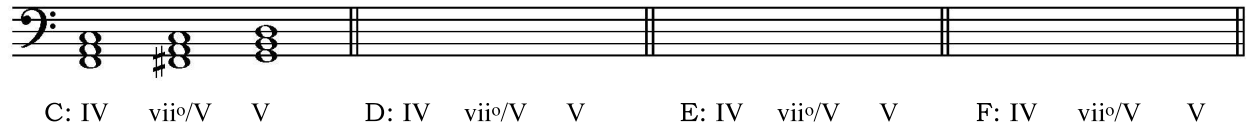
Spelling vii°/V in Major and Minor Keys: Student Handout and Worksheets

Dr. Paula J. Telesco

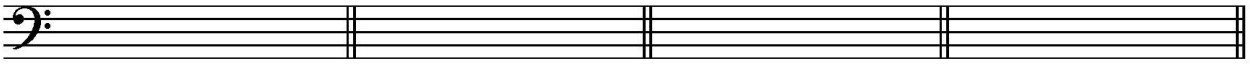
I. Spelling IV–vii°/V–V in Major Keys (ascending by step).

When learning to spell the secondary leading tone chord vii°/V, it may be helpful to view the chord as an altered IV chord with a raised root. By raising the root of IV one chromatic half step, from $\hat{4}$ to $\sharp\hat{4}$ (*fa* to *fi*), major IV is transformed into the diminished triad, vii°/V.[4] Notice that if you then follow the vii°/V with the V chord, the bass line ascends chromatically, $\hat{4}$–$\sharp\hat{4}$–$\hat{5}$ (*fa–fi–sol*).

In the following exercises, provide the *Major Key Signatures* and notate the requested IV, viio°/V, and V chord in each major key, in root position. Make sure you include all necessary accidentals. The first example has been done for you.

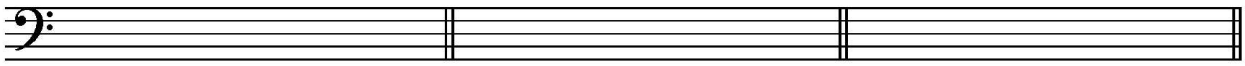


C: IV vii°/V V D: IV vii°/V V E: IV vii°/V V F: IV vii°/V V



G: IV vii°/V V A: IV vii°/V V B: IV vii°/V V C♯: IV vii°/V V

D♭: IV vii°/V V E♭: IV vii°/V V F♯: IV vii°/V V G♭: IV vii°/V V



A♭: IV vii°/V V B♭: IV vii°/V V C♭: IV vii°/V V

[4] Raising the root of any major triad turns it into a diminished triad, and therefore potentially the vii° of some other secondary key. But spelling the vii° of some other secondary key would require different chromatic alterations.

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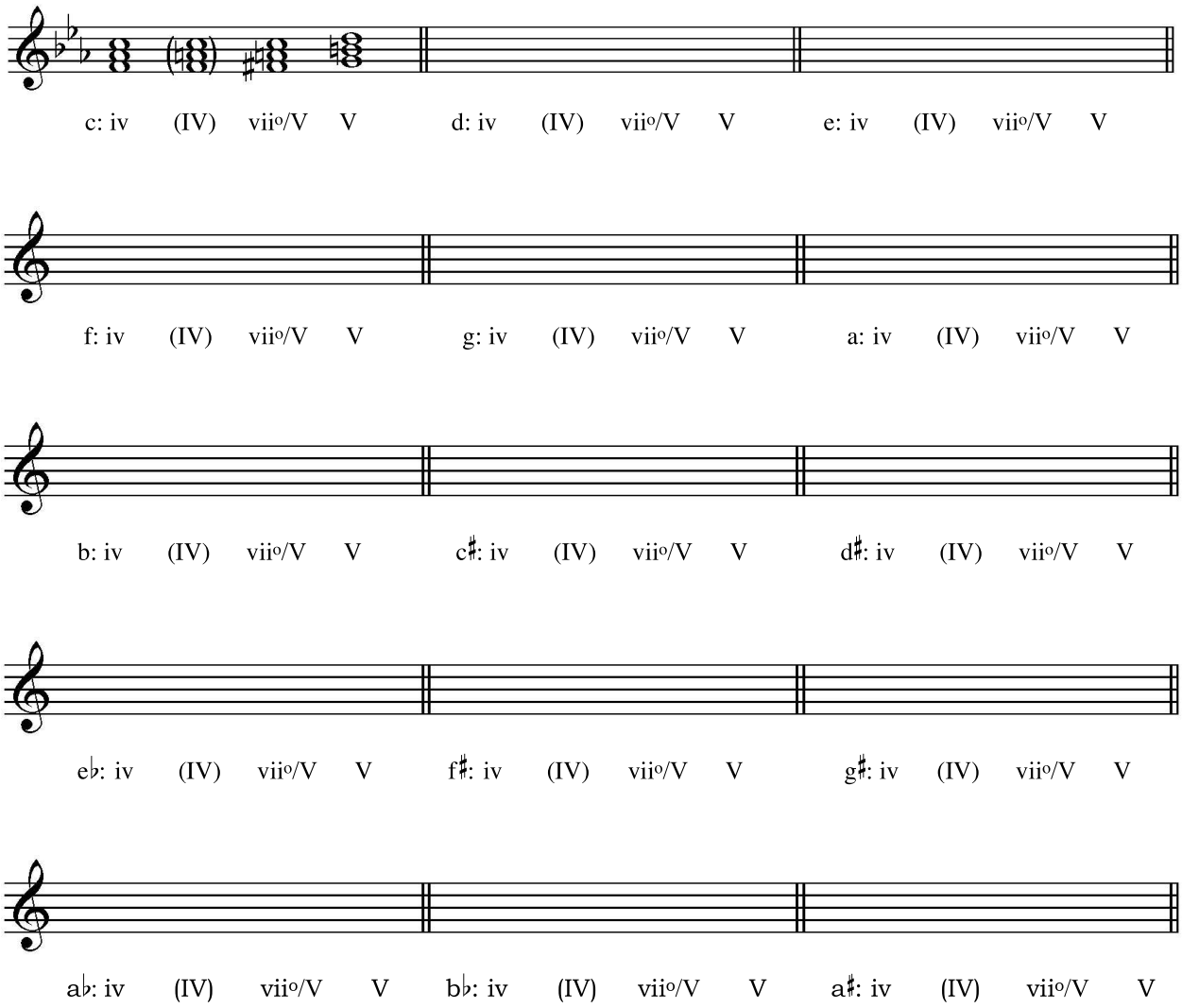
II. Spelling iv–(IV)–vii°/V–V in Minor Keys (ascending by step).

When spelling the vii°/V in a major key, only one alteration is necessary: raising the root of IV. But in a minor key, two alterations are required, because the iv chord is minor. You must first raise the third of iv one chromatic half step, from ↓$\hat{6}$ to ↑$\hat{6}$ (*le* to *la*) to create a major IV chord. (This is the IV chord that would appear in the parallel major key.) Then, raise the root of IV by one chromatic half step, from $\hat{4}$ to ♯$\hat{4}$ (*fa* to *fi*), as you do in a major key, transforming this chord into vii°/V. When followed by the V chord, the bass line ascends chromatically, $\hat{4}$–♯$\hat{4}$–$\hat{5}$ (*fa–fi–sol*).

In the following exercises, provide the *Minor Key Signatures* and notate the requested iv, IV, viio°/V, and V chord in each minor key, in root position. Make sure you include all necessary accidentals, including the leading tone for the V chord. The first example has been done for you.



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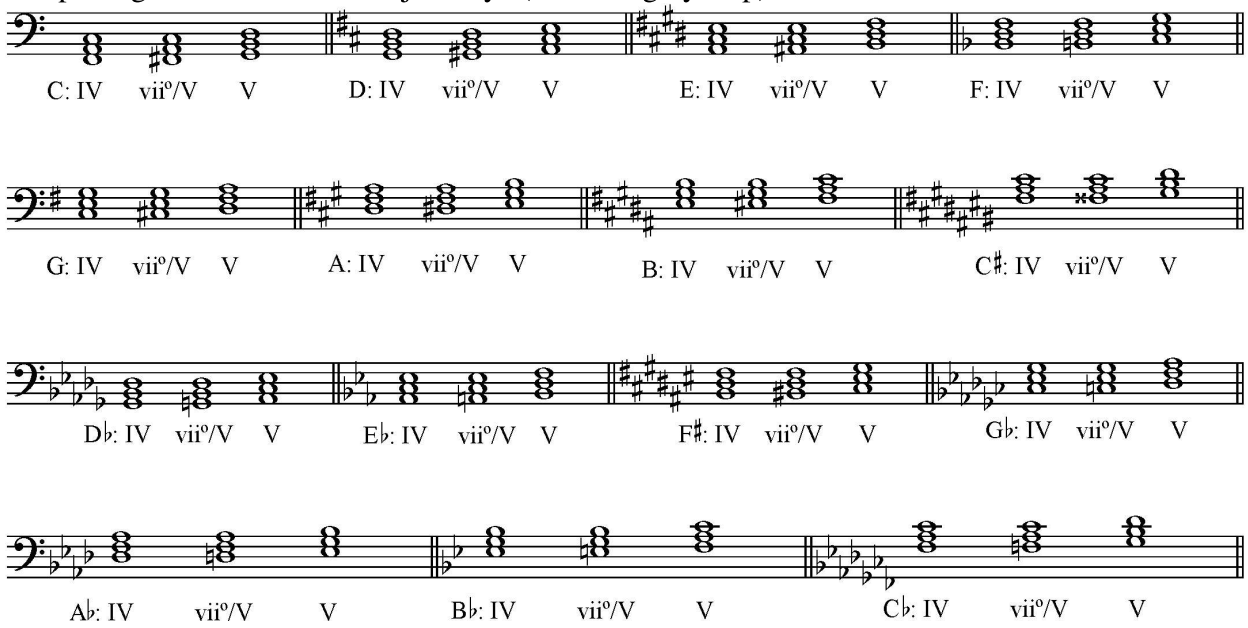
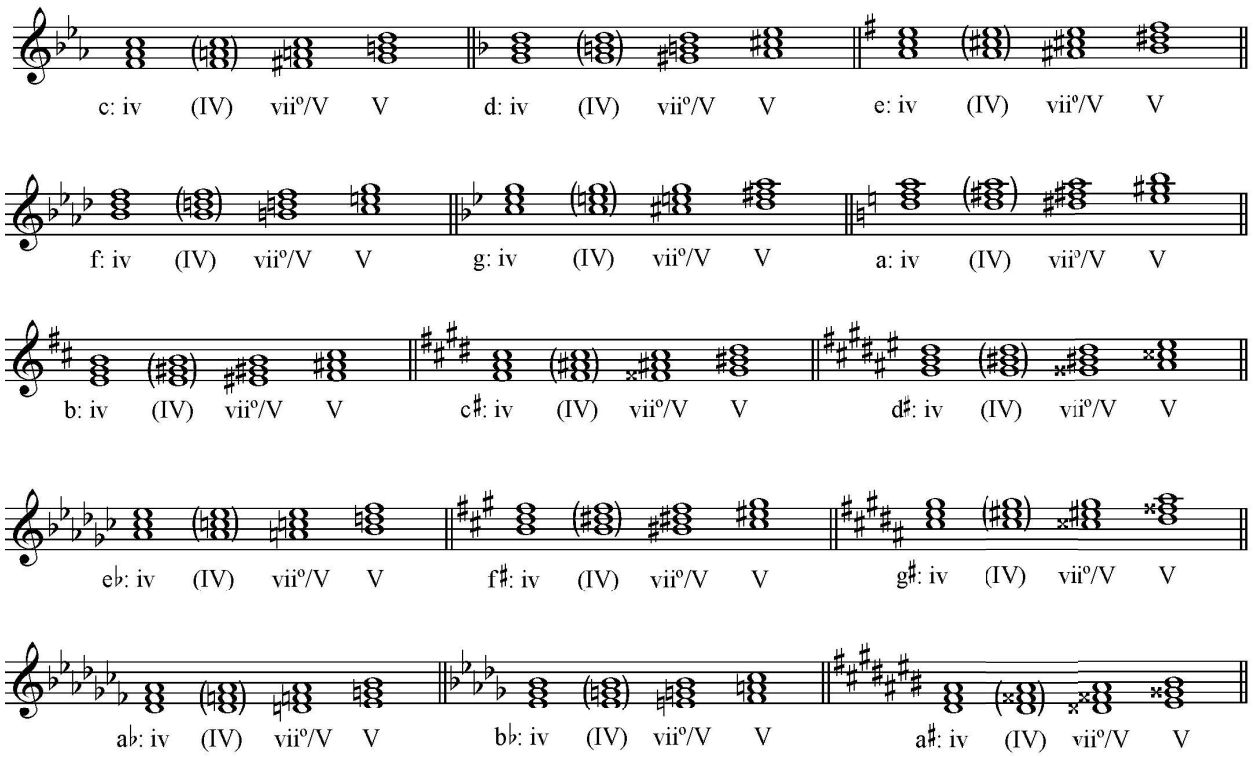
Answer Key

I. Spelling IV–vii°/V–V in Major Keys (ascending by step).



II. Spelling iv–(IV)–vii°/V–V in Minor Keys (ascending by step).



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Spelling vii°/V in Major and Minor Keys: Student Handout and Worksheets

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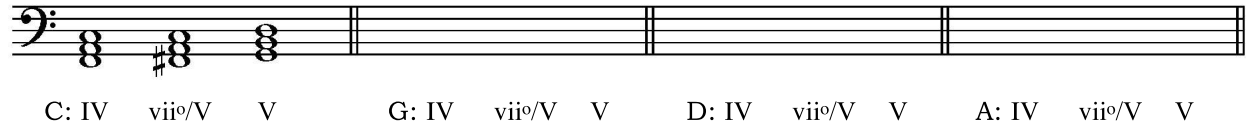
I. Spelling IV–vii°/V–V in Major Keys (ascending through the Circle of Fifths).

When learning to spell the secondary leading tone chord, vii°/V, it may be helpful to view the chord as an altered IV chord with a raised root. By raising the root of IV one chromatic half step, from $\hat{4}$ to $\sharp\hat{4}$ (*fa* to *fi*), major IV is transformed into the diminished triad, vii°/V.[5] Notice that if you then follow the vii°/V with the V chord, the bass line ascends chromatically, $\hat{4}$–$\sharp\hat{4}$–$\hat{5}$ (*fa–fi–sol*).

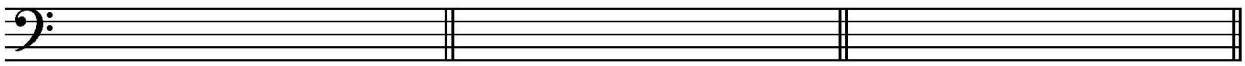
In the following exercises, provide the *Major Key Signatures* and notate the requested IV, viio°/V, and V chord in each major key, in root position. Make sure you include all necessary accidentals. The first example has been done for you



C: IV vii°/V V G: IV vii°/V V D: IV vii°/V V A: IV vii°/V V

E: IV vii°/V V B: IV vii°/V V F♯: IV vii°/V V C♯: IV vii°/V V

F: IV vii°/V V B♭: IV vii°/V V E♭: IV vii°/V V A♭: IV vii°/V V



D♭: IV vii°/V V G♭: IV vii°/V V C♭: IV vii°/V V

[5] Raising the root of any major triad turns it into a diminished triad, and therefore potentially the vii° of some other secondary key. But spelling the vii° of some other secondary key would require different chromatic alterations.

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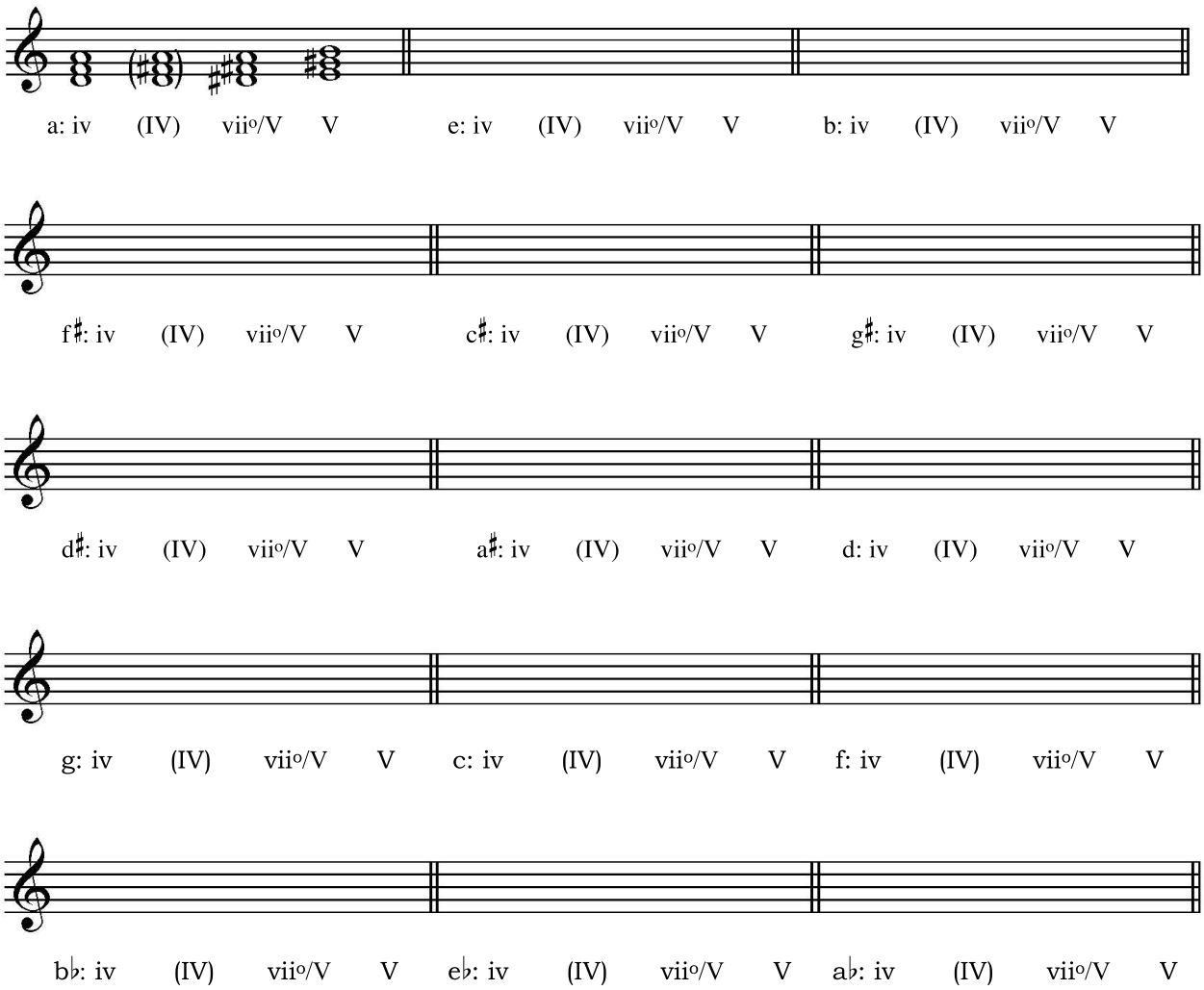
II. Spelling iv–(IV)–vii°/V–V in Minor Keys (ascending through the Circle of Fifths)

When spelling the vii°/V in a major key, only one alteration is necessary: raising the root of IV. But in a minor key, two alterations are required, because the iv chord is minor. You must first raise the third one chromatic half step, from ↓$\hat{6}$ to ↑$\hat{6}$ (*le* to *la*) to create a major IV chord. (This is the IV chord that would appear in the parallel major key.) Then, raise the root of IV by one chromatic half step, from $\hat{4}$ to $\sharp\hat{4}$ (*fa* to *fi*), as you do in a major key, transforming this chord into vii°/V. When followed by the V chord, the bass line ascends chromatically, ~~$\hat{4}$–$\sharp\hat{4}$~~–$\hat{5}$ (*fa–fi–sol*).

In the following exercises, provide the *Minor Key Signatures* and notate the requested iv, IV, viio°/V, and V chord in each minor key, in root position. Make sure you include all necessary accidentals, including the leading tone for the V chord. The first example has been done for you.



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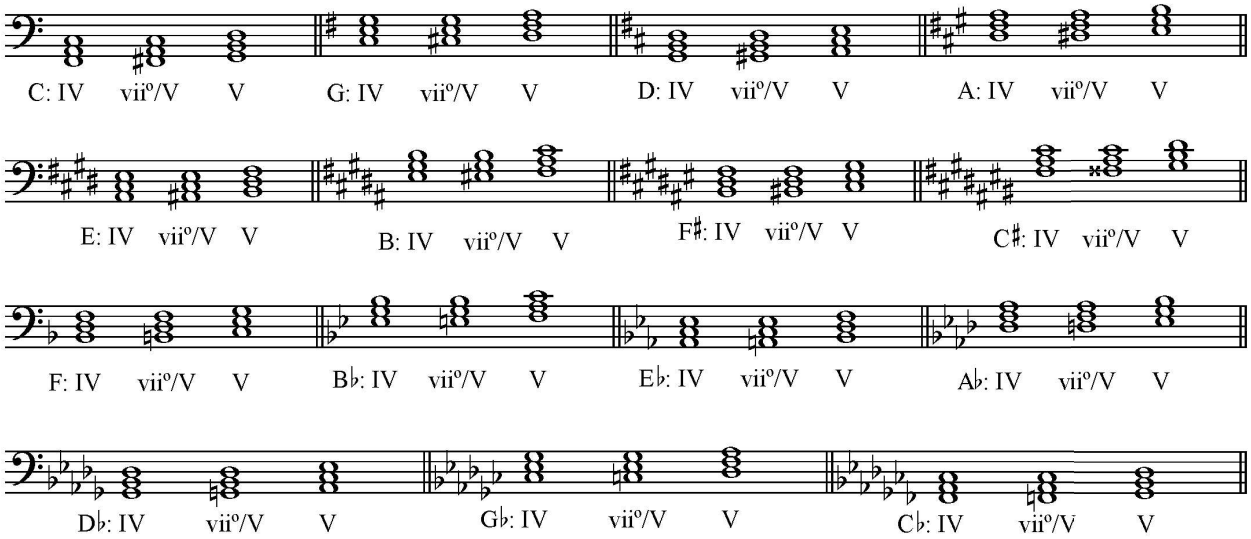
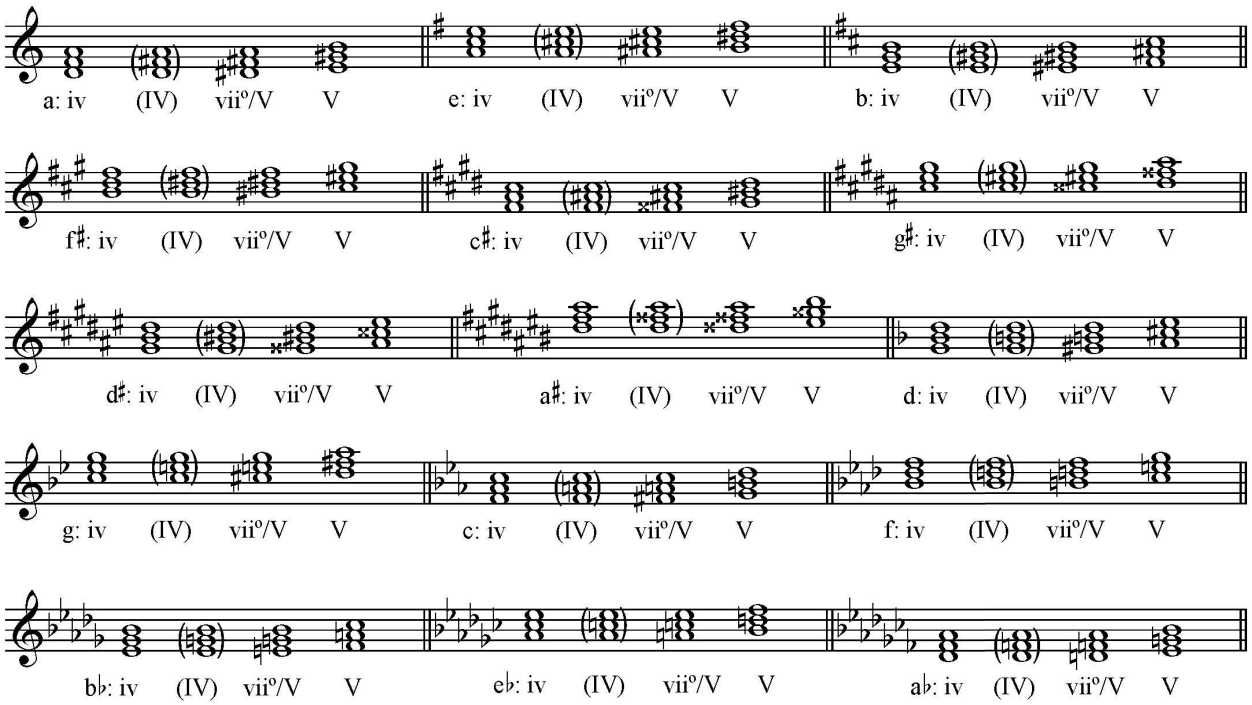
Answer Key

1. Spelling IV–vii°/V–V in Major Keys, ascending through the Circle of Fifths.



2. Spelling iv–(IV)–vii°/V–V in Minor Keys, ascending through the Circle of Fifths.



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