

Marshall University

From the Selected Works of Mark Zanter

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MUS 112: Elementary Music Theory II text

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MUS 111: Elementary Music Theory II
Mark Zanter
Marshall University
Spring 2021

Music 112

Unit One:

- 1.1 The Harmonic Model
- 1.2 The Rule of the Octave
- 1.3 Cadences
- 1.4 Resolution of the Mm7 chord
- 1.5 Part-writing review
- 1.6 Second Inversion Chords
- 1.7 Diatonic Sequences
- 1.8 Non-chord Tones
- 1.9 Secondary Dominants
- Unit One Assignments

1.1

Harmonic Model: Primary, Secondary and Tertiary triads:

The diagram below is a template for melodic harmonization that can be combined with Phrase models (e.g. T-D-T) to generate a variety of harmonizations.

Secondary or tertiary chords may be used as substitutes for primary chords when suggested by the musical context. In this unit we will begin to explore more fully the use of secondary and tertiary chords especially those of the predominant category: ii, IV, and vi.

Primary:	I	V	I	IV/V	I/V	IV	V	I
Secondary:	vi	ii/vii°	vi	ii/vii°	iii	ii/vi	vii°	vi
Tertiary:	IV/ii ⁷	V/V	iii		iii	V/V	iii	IV/ii ⁷

Examples: Harmonize each melody given.

Bach: Aus meines Herzens Grunde:

1. Melody: Harmonize the melody using the Harmonic model. Add one bass note for each melodic pitch.

Bach: Aus meines Herzens Grunde

2. Fundamental Bass: The example below applies the Harmonic Model to the melody.

Bach: Aus meines Herzens Grunde

G: I I V I V I I V I V I V I V I

3. Harmonization: The example below harmonizes the chorale melody in four parts.

Measure 1	vi is substituted for I, V6 is used to connect by step to I of m. 2
Measure 2	3-2-1 of the soprano combined with 1-2-3 in the bass creating a voice exchange. V on the "and" of beat 2 has a doubled fifth.
Measure 3	1-2-3 in soprano is combined with 1-7-1 in the bass.
Measure 4	Half cadence on beat one (V). I is used on beat three.
Measure 5	V7, chordal seventh in tenor. V6/5 on beat three. Chordal seventh in the soprano.
Measure 6	Chordal seventh is added on beat three in the tenor. Leading tone in the alto resolves to the fifth of the tonic chord at the PAC.

1.1

Bach: Aus meines Herzens Grunde

G: I vi V⁶ I V⁴ I⁶ I V⁶ I V I V⁷ 5 I V⁷ I

Compare the solution above with the original chorale below. Analyze it with Roman numerals and figured bass first:

Measure 1	IV6 substitutes for I on beat two.
Measure 2	Notice voice crossing in the tenor, vi substitutes for I on beat three.
Measure 3	IV substitutes for I on beat one, vii°6 substitutes for V on the end of beat two
Measure 4-7	Ascending bass line from 1-7-1-2-3-4-5-1 paired with 3-5-4-3-2-1 in the soprano.

Bach: Aus meines Herzens Grunde

Jesu, nun sei gepreiset

1. Melody: Harmonize the melody using the Harmonic model. Add one bass note for each melodic pitch.

Bach: Jesu, nun sei gepreiset

2. Fundamental Bass: The example below applies the Harmonic Model to the melody.

Bach: Jesu, nun sei gepreiset

C: I V I IV V I V I

3. Harmonization below in four parts.

Measure 1	Beat two vi is substituted for I. Bass voice connects to I, 6-7-1.
Measure 2	IV6 followed by ii6, 6/5.
Measure 3	iii-vi-ii-V substitutes for V-I-I-V (ii is tertiary substitute for I, and must contain a chordal seventh). V7 used on beat four. PAC concludes the excerpt.

Bach: Jesu, nun sei gepreiset

C: I vi V⁶ I IV⁶ ii⁶ 6/5 V iii⁶ vi ii⁶ V⁷ I

Compare this solution with the original chorale below:

Measures 1-2	<p>Both measures contain secondary dominant chords. M. 1 bt. 4 uses a C chord functioning as a temporary V of F (IV), m. 2 bt. 1-2 the F chord functions as a dominant of the Bb chord at the cadence, and m. 2 bt. 4 uses a D/F# chord functioning as a temporary dominant of G.</p> <p>The motion to Bb at the first cadence is unusual and can be reasoned by way of the common tone Bb with G. Bb is the relative major of G minor, the parallel key of G Major. Secondary dominants and closely related keys are covered in Unit 1, 2.</p>
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Bach: Jesu, nun sei gepreiset

Telemann: Trio Sonata for flute oboe and continuo (from Musique de Table)

1. Melody: Harmonize the melody using the Harmonic model. Add one bass note for melodic pitches, metric beats, or use one chord per measure.

Telemann: Trio Sonata

2. Fundamental Bass: The example below applies the Harmonic Model to the melody.

Telemann: Trio Sonata

E: I V I IV V I V I V V I

3. Harmonization: The example below harmonizes the chorale melody in four parts.

Measure 1-2	IV6 is added before V6 creating T-Pd-D-T. Substitute vii° for V.
Measure 4-7	IV6-V6 are used to fill in bass motion: 5-6-7-5 (rule of octave)

Telemann: Trio Sonata

E: I IV⁶ V⁶ I IVvii° I V IV⁶ V⁶ 7 I

Compare this solution with the original:

Measure 1, 3	ii7 or ii are used instead of IV
Measure 3	F# chord on beat three is a secondary dominant of the V that follows.
Measure 4	Octave leap in bass appears at the half cadence.
Measures 5-7	Note A ⁴ in the alto voice used as a common tone between IV and V.

Telemann: Trio Sonata

E: I ii⁷ V⁷ I IV ii V/V⁵ V IV⁶ V⁵ V⁷ I

1.2

Rule of the Octave:

Our goals for studying the rule of the octave are to use:

- the Rule of the Octave as a part-writing and compositional aid.
- the Rule of the Octave for harmonic analysis and determining harmonies for unfigured bass lines.

The Rule of the Octave (RoO) specifies harmonies and inversions that can be used over a given bass enabling you to predict harmonizations by examining the bass voice. In minor keys, RoO is the same as major (use the melodic minor scale). Note changes when the bass voice descends.

Ascending Major:

F: I V_3^6 I_3^6 ii_3^5 V IV_3^6 V_3^5 I

Descending Major:

F: I V_3^6 $V/V_4^\#$ V V_4^6 I^6 V_4^6 I

Examples:

Determine the key. Analyze the bass voice using RoO. Add complete Roman numerals and figured bass quickly and accurately. Discuss discrepancies and substitutions (e.g. vii° for V).

Bach: O Herre Gott, dein göttlich Wort

G: I vi iii IV V^7 vi V I V iii IV^6 vii^0 I IV^6 V^6 IV^6 V_4-3 7 I

Haydn: Hob. XVI:3, mvt. III

Menuetto

C: I 6 IV I V⁵ I

Haydn: Hob. XVI/37, mvt. III

Presto

D: I 7⁶ vii⁰ V⁷ 4 I³

Clementi: Op. 36, No. 2

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G: I V⁶ I ii⁶ V⁶ 5 I

Beethoven: Op. 13, mvt. II

(9) **Adagio cantabile.**

Ab: I V² I⁶ V³ I V⁶ vi V/V³ V

Ab: vii⁰ 4 V⁶ 4 I⁶ V/ii ii V⁷ I

1.3

Cadence:

The conclusion or punctuation point in a musical phrase; the formula upon which such a conclusion is based.

Cadence Type	Melodic Motion	Harmonic Motion	Function
PAC: Perfect Authentic Cadence (also called authentic, final, full, or closed)	Soprano: 7-1, or 2-1.	Root position V-I, V-i. Bass: 5-1.	PAC's are reserved for the end of a phrase, a period, or the end of a piece. They are the most conclusive cadence.
IAC: Imperfect Authentic Cadence.	Soprano: 2-3, 4-3, 5-5. Tones of D-T different from PAC.	V-I, V-i. Most often in root position, but V may be inverted.	IAC's often appear internally in phrase groups. When scale degrees other than the tonic appear in the soprano voice, the cadence is less conclusive than a PAC.
HC: Half Cadence Phrygian Half Cadence	2, or 5 are common at the chord of resolution.	Any chord leading to the V of the key (x -V). Phrygian half cadence uses iv^6 -V in a minor key. Half-step (Bass: $b6$ -5) gives the cadence its name.	HC's appear at the ends of phrases where continuation is implied. They are inconclusive with respect to the home key.
Plagal: Plagal Cadence	No specific requirement. Soprano is often 1.	IV-I; iv -i. Plagal cadences may employ root position or inverted chords.	May embellish the final arrival of the tonic. Sometimes referred to as the "Amen" cadence. Plagal cadences are considered less conclusive than PAC, or IAC.
DEC: Deceptive Cadence sometimes called Interrupted.	V, V7 resolves as if going to I, Bass 5-6	V- vi ; V-VI. Deceptive resolution of V- vi usually employs root position chords (Bass: 5-6; 5- $b6$).	The unexpected resolution from V to vi /VI gives the cadence its name. DEC often occur in the phrase preceding an IAC, or PAC. They interrupt the arrival of the Tonic chord.

Perfect Authentic Cadence (V-I/I, V7-I/i):

Soprano (7-1, 2-1) and bass (5-1). V7 can be used if chordal 7th is in an inner voice.

Major:

B \flat : V I V⁷ I

Minor:

Gm: V I V⁷ I

Imperfect Authentic Cadence (V-I/i; V7-I/i):

IAC are any authentic cadence (V-I/i) that does not follow the PAC formula. The example below shows some of the many possibilities. Check the voice-leading of each.

B \flat : V⁷ I V⁷ I V I V⁵ I

Half Cadence (x-V): #3 uses a secondary dominant.

A: IV V ii⁶ V V/V V I V vi V

Deceptive Cadence (V-vi; V-VI):

In the deceptive cadence the dominant (V) moves to vi instead of I. When this cadence occurs, the listener is deceived by the vi substituted for the expected I.

G: V⁷ vi

Examples:

Identify the cadences in each example below. Half cadences may employ secondary dominants (e.g. ex. #2).

Bach: O Herre Gott, dein göttlich Wort

G: I vi iii IV V⁷ vi V I V iii IV⁶ vii⁰⁷ I IV⁶₃ V⁶ IV⁶ V⁴⁻³ 7 I

Bach: Ein' feste Burg is unser Gott

D: I vi ^{4 6}_{2 4} vii⁰ I⁶ vii⁰ I V/V 7 V vii⁰/V vii⁰/vi vi⁶ iii IV vii⁰ I V⁴₃ I

Identify the cadences in each example below. Also discuss changes of texture (rhythmic activity) bass voice register and melodic patterns, and ornamentation as they relate cadences, or differentiating phrases. Half cadences may employ secondary dominants, or motions to the dominant key.

Haydn: Hob. XVI:3, mvt. III

C: I ⁶ IV I V⁵ I V⁶ I V⁶ I V⁶ I V⁴₃ V/V V

Telemann: Trio Sonata

E: I ii⁷ V⁷ I IV ii V/V⁵ V IV⁶ V⁵ V⁷ I

Beethoven: Bagatelle, Op. 19

Chord progression for Beethoven: Bagatelle, Op. 19 (measures 65-76):

Gm: i VI ⁽⁶⁾i₃ iv I⁶ iv I⁶ iv I⁶ iv I⁶ iv I⁶ iv ⁶I

Mozart: K. 332, mvt. I

Chord progression for Mozart: K. 332, mvt. I (measures 77-84):

C: IV⁴ I ⁶I⁴ 3 V⁷ vi

Bach: Weltlich' Ehr' und zeitlich Gut

Chord progression for Bach: Weltlich' Ehr' und zeitlich Gut (measures 1-12):

C: I ⁶IV ⁹⁻⁸ii V² I⁶ IV I V I vii⁰/V V V/V V ⁵⁻⁴⁶ii V⁷ I

Handel: Concerto Grosso, Op. 6/9, Gigue

Chord progression for Handel: Concerto Grosso, Op. 6/9, Gigue (measures 23-34):

F: I V⁶ vi IV⁶ V iii⁶ vi⁶₂ ii⁶

Chord progression for Handel: Concerto Grosso, Op. 6/9, Gigue (measures 35-46):

F: V⁴₂ I⁶ ii V V⁵ I ii⁵ V⁷ vi V⁵ I ii⁵ V⁷ I

Bach: The Well Tempered Clavier, Book I, Prelude in E

Chord progression for Bach: The Well Tempered Clavier, Book I, Prelude in E (measures 1-8):

E: [♯]VI V ⁶I V ⁷vi I [♯]VI V/IV IV vii⁰ I

Resolutions of the Dominant Seventh Chord (V-Mm7):

1. **Root Position:** Scale degrees resolve: 5-1, 2-1, 2-3, 7-1, 4-3. Root position Mm7 chord resolves to a tonic triad with a tripled root and a third. Alternately the leading tone can be resolved to the fifth of the chord, if it is in an inner voice (alto, or tenor).
2. **First Inversion:** Scale degrees resolve: 5-5, 7-1, 2-1, 4-3. The leading tone in the bass of the first inversion V6/5 resolves to the tonic except in rare cases.
3. **Second Inversion:** Scale degrees resolve: 5-5, 7-1, 2-1, 4-3. The bass of the second inversion V4/3 may resolve to 1, or 3.
4. **Third Inversion:** Scale degrees resolve: 5-5, 7-1, 2-1, 4-3. The bass of the third inversion V4/2 must resolve 4-3, to a tonic triad in first inversion.

1. 2. 3. 4.

G: V₃⁷ I V₃⁶ I V₃⁶ I V₃⁶ I V₂⁶ I

Examples:

Examine scale degree resolutions for V-I, V-vi, V7-I, V7-vi in each of the following. Discuss discrepancies and observe motions in the bass voice.

Bach: O Herre Gott, dein göttlich Wort

G: I vi iii IV V⁷ vi V I V iii IV⁶ vii⁰⁷ I IV⁶₃ V⁶ IV⁶ V₄₋₃ 7 I

Bach: Aus meines Herzens Grunde

G: I vi V₃ I V₄ I⁶ I V₆ I V I V⁷ ⁶/₅ I V 7 I

[illegible]

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G: I V⁵ I ii⁶ V⁴ I

Part-writing Guideline Summary:

Voicing:	Distribute the notes of a chord on the staff so that there is an octave or less between adjacent Tenor, Alto, and Soprano voices.	
	<ul style="list-style-type: none"> -Double the bass. -Avoid doubling tendency (TT) or chromatically altered tones. -Double the root of the chord as alternate to doubling the bass. -Fifth of the chord may be omitted. 	
	Keep each voice in its proper tessitura (range).	
Melodic motion:	<ul style="list-style-type: none"> -Contrary motion is preferred between soprano and bass. -Leaps of a fourth or greater in one voice, must be followed by a step in the opposite direction. -- -Avoid leaping a tri-tone. 	
Voice-Leading:	Parallel perfect octaves, fifths, and unisons are to be avoided. Approach and leave P5, P8 using contrary motion.	
	Conjunct (stepwise) motion is preferred for note-to-note motion in one voice.	
	Keep common tones in the same voice, and move other voices by step whenever possible.	
	Resolve tendency tones in Soprano and Bass. Do so if possible in the inner voices.	
	Avoid crossing voices.	

Examples:

Find the following:

1. Root position chords moving by the interval of a:

- Fifth (e.g. I-V, I-IV)
- Third (e.g. I-vi, IV-ii)
- Second (e.g. I-ii, IV-V)

2. Contrary motion; especially between soprano and bass voices.

3. Doubling of bass or root

4. Resolution of tendency tones in outer voices

5. Voice overlap, voice crossing

6. Examine voice-leading between chords

Bach: Dir, dir, Jehova, will ich singen

PAC

HC

B \flat : I $\overset{4}{\text{—}}$ V $\overset{3}{\text{—}}$ I IV $\overset{6}{\text{—}}$ $\overset{6}{\text{—}}$ ii $\overset{6}{\text{—}}$ I vi IV V $\overset{4}{\text{—}}$ $\overset{7}{\text{—}}$ I V $\overset{6}{\text{—}}$ I V $\overset{4}{\text{—}}$ I $\overset{6}{\text{—}}$ vii $\overset{6}{\text{—}}$ I $\overset{6}{\text{—}}$ V/V $\overset{2}{\text{—}}$ V

Bach: Als vierzig Tag' nach Ostern

Em: i $\overset{6}{\text{—}}$ V $\overset{6}{\text{—}}$ i IV $\overset{6}{\text{—}}$ V $\overset{6}{\text{—}}$ i v $\overset{6}{\text{—}}$ iv $\overset{6}{\text{—}}$ (vii) $\overset{4}{\text{—}}$ iv $\overset{6}{\text{—}}$ V

Bach: Was Gott tut, das ist wohlgetan

G: V IV $\overset{6}{\text{—}}$ $\overset{7}{\text{—}}$ vii $\overset{0}{\text{—}}$ I IV V $\overset{4-3}{\text{—}}$ I

The Four Uses of the Second Inversion triad or seventh chord:

1) Passing:

The passing 6/4 occurs as the middle chord of a three-pitch scalar ascent or descent in the bass; T-D-T tonic expansion. All voices are conjunct, and the 6/4 chord is the central chord whether the bass ascends or descends.

Four musical examples showing passing 6/4 chords in F major. The examples are arranged in a 2x2 grid. Each example shows a three-pitch scalar ascent or descent in the bass, with the 6/4 chord as the central chord. The chords are labeled as follows:

- Top-left: F: I, V⁴, I⁶
- Top-right: F: I, V₃⁴, I⁶
- Bottom-left: F: I, V⁴, I³
- Bottom-right: F: I⁶, V₃⁴, I

2) Cadential:

The Cadential 6/4 is part of an authentic cadence. A tonic chord in second inversion precedes the dominant in a—PAC, or IAC. 5th scale degree in the bass; tonic 6/4 embellishes the dominant.

Two musical examples of cadential 6/4 chords. The left example is from Mozart: K. 284, Piano Sonata, mvt. 3, showing a cadence in D major: D: I, ii⁶, I⁴, V⁷, I. The right example is from Clementi: Op. 36, no. 3, mvt. 1, showing a cadence in C major: C: ii⁶, I⁴, V, I.

3) Pedal:

Pedal 6/4: a single bass pitch supports 2-3 chords: 1. Triad in root position, 2. 6/4 chord, 3. Return to original root position chord. Often I-IV_{6/4}-I (T-Pd-T). This type is sometimes called Neighboring 6/4.

A musical example of a pedal 6/4 chord in G major. The bass note G supports the chords G: I, IV₄ (C-E-G), and I (G-B-D).

Arpeggiated:

The Arpeggiated 6/4 arises as the result of a bass voice arpeggiation.

Schumann: Wilder Reiter

G: I $\begin{smallmatrix} 6 \\ 3 \end{smallmatrix}$ $\begin{smallmatrix} 6 \\ 4 \end{smallmatrix}$

F: V I $\begin{smallmatrix} 6 \\ 4 \end{smallmatrix}$ $\begin{smallmatrix} 6 \\ 3 \end{smallmatrix}$ $\begin{smallmatrix} 6 \\ 4 \end{smallmatrix}$ $\begin{smallmatrix} 6 \\ 4 \end{smallmatrix}$

Examples:

Identify second inversion types in the following excerpts.

Clementi: Op 36. no. 3

G: V⁷ IV ^{$\begin{smallmatrix} 6 \\ 3 \end{smallmatrix}$} V ^{$\begin{smallmatrix} 6 \\ 3 \end{smallmatrix}$} I V ^{$\begin{smallmatrix} 6 \\ 4 \\ 3 \end{smallmatrix}$} I ^{$\begin{smallmatrix} 6 \\ 3 \end{smallmatrix}$} V⁷ I

Schubert: Op. 9, #3, Waltz

A \flat : I IV ii V V⁷ I ^{$\begin{smallmatrix} 6 \\ 4 \end{smallmatrix}$} V⁷ I PAC

Beethoven: Op. 14, no. 2, Piano Sonata

G: I IV ^{$\begin{smallmatrix} 6 \\ 4 \end{smallmatrix}$} V ^{$\begin{smallmatrix} 6 \\ 5 \\ 3 \end{smallmatrix}$} I ii⁶ I ^{$\begin{smallmatrix} 6 \\ 4 \end{smallmatrix}$} V⁷ I PAC

Diatonic Chord Sequences:

In the diatonic collection functional chord sequences tend to follow:

I-IV-vii^o-iii-vi-ii-V-I, or i-iv-VII-III-VI-ii^o-V-I

This sequence follows an interval progression of ascending fourths or descending fifths.



The sequence in Major and minor. Observe common tones, and note the bass progressions. This sequence is common in musical literature in full or part.

Chord sequence in B \flat major: B \flat , E \flat , A dim, Dm, Gm, Cm, F, B \flat , B \flat M7, E \flat M7, A \emptyset 7, Dm7, Gm7, Cm7, F7, B \flat .

Bass progression: B \flat : I IV vii^o iii vi ii V I B \flat : I⁷ IV⁷ vii^{o7} iii⁷ vi⁷ ii⁷ V⁷ I

Chord sequence in B \flat minor: B \flat M7, E \flat M7, A \emptyset 7, Dm7, Gm7, Cm7, F7, B \flat , B \flat M7, E \flat M7, A \emptyset 7, Dm7, Gm7, Cm7, F7, B \flat .

Bass progression: B \flat : I⁵ IV⁷ vii^{o5} iii⁷ vi⁵ ii⁷ V⁵ I B \flat : I⁵ IV⁴₂ vii^{o5} iii⁴₂ vi⁵ ii⁴₂ V⁵ I

Chord sequence in C minor: Cm, Fm, B \flat , E \flat , A \flat , Ddim, G, Cm, Cm7, Fm7, B \flat 7, E \flat M7, A \flat M7, D \emptyset 7, B \flat , Cm.

Bass progression: Cm: i iv VII III VI ii^o V i Cm: i⁷ iv⁷ VII⁷ III⁷ VI⁷ ii^{o7} V⁷ i

Chord sequence in C major: Cm, Fm, B \flat , E \flat , A \flat , Ddim, G, Cm, Cm7, Fm, B \flat M7, E \flat , A \flat M7, Ddim, G7, Cm.

Bass progression: Cm: i⁶ iv VII⁶₄ III VI⁶₄ ii^o V⁶ i Cm: i⁷ iv⁶ VII⁷ III⁶ VI⁷ ii^{o6} V⁷ i

Diatonic progressions/sequences:

(I)-ii-V-I: (T)-Pd-D-T:

Clementi: Op. 36, No. 2

G: I V⁶₅ I ii⁶ V⁶₄⁵₃ I

V-VI-ii°-V-i-iv-V-VI- ii°-V-i

Corelli: Concerto Grosso #8

Gm: i⁶ VII i⁶ v VI⁶ III iv⁶ V[#] VI ii°⁶ V i iv V VI ii°⁶ V[#] i

(I/V)-iii-vi-ii-V-I: (D)-T^{sub}-Pd-Pd-D-T

Handel: Concerto Grosso, Op. 6/9, Gigue

F: I V⁶ vi IV⁶ V iii⁶ vi⁶₄₂ ii⁶

F: V⁶₄₂ I⁶ ii V V⁶₅ I ii⁶₅ V⁷ vi V⁶₅ I ii⁶₅ V⁷ I

i-iv-VII-III-VI-ii-V-i (full sequence)

Bach: Brandenburg Concerto #2 (reduction)

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Dm: i iv VII III VI

Dm: ii V i

(i) V/iv-iv-VII-III-VI-ii^{o7}-V⁷ (full sequence)

Chopin: Op. 48, no. 1

(17)

Cm: V/iv iv VII III VI ii^{o7} V⁷

As we continue our study of harmony and formal structure, we will see that sequential progressions often serve specific functions within the form of a piece.

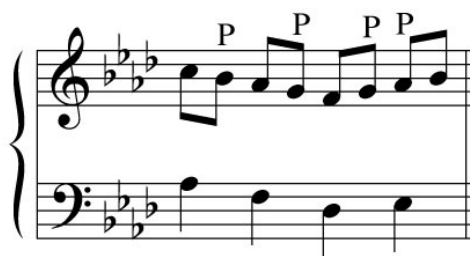
Non-chord Tones (NCT):

A non-chord tone (NCT) is a tone that is not a member of the underlying harmony.

NCT's are also referred to as Embellishing tones. NCT's are integral to a melody as they connect or emphasize chord tones. NCT's may be chromatic (outside of the key).

Passing Tone:

A NCT passing between two chord tones, and connecting them through ascending or descending motion.



Neighbor Tone:

A NCT occurring a step above or a step below a chord tone whose resolution is to the same chord tone.



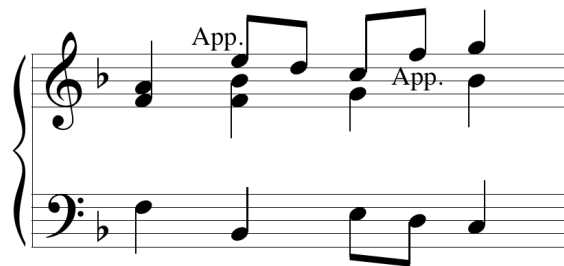
Suspension:

The suspension is realized in three stages: preparation (as a chord tone-consonance), suspension (as a dissonance), and resolution by step to a consonance on a weak beat. Suspensions are typically diatonic and the intervals of a suspension are often shown in figured bass.



Appoggiatura:

An appoggiatura occurs when a melodic line leaps to a dissonance and resolves by step to a consonant chord tone.



Escape Tones:

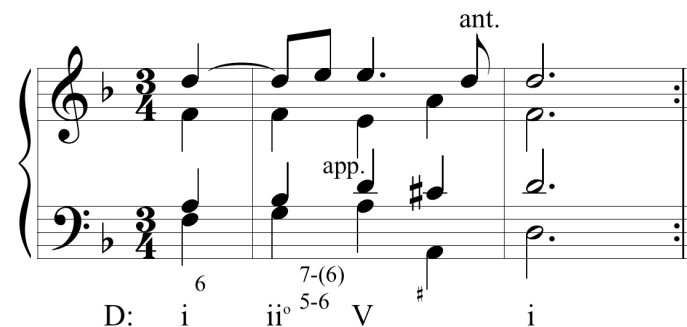
An escape tone occurs when a line steps to a dissonance and then leaps to a consonance. These are also called incomplete neighbor tones (IN).



Anticipation:

The Anticipation is the incidence of a tone before the arrival of its supporting harmony. The tonic pitch is the most common tone employed as an anticipation.

Corelli: Op. 5, no. 7, *Sarabande*



Rhythmic Anticipation:



For each of the following:

- Analyze chords with roman numerals and figure bass
- Identify cadences
- Circle and label all non-chord tones.

1. Bach: O Gott, du frommer Gott (Key of D)

Bach: O Gott, du frommer Gott

D:

2. Bach: Weltlich' Her' und zeitlich Gut (Key of C)

Bach: Weltlich' Ehr' und zeitlich Gut

3. Mozart: Piano Sonata K. 333 (III), (Key of Bb)

Mozart: Piano Sonata K. 333 (III)

Bb:

Secondary Dominant chords:

Secondary Dominants are triads or Mm7 seventh chords that function as dominant chords (V) outside a work's original key. Because they function outside the original key, most include at least one accidental to create either the leading tone of an implied key, or the chordal seventh of the secondary dominant chord.

Secondary chords are important because they initiate motions to different keys.

Strategy for identifying secondary Dominants:

- Identify the key of the piece
- Look for accidentals foreign to the key
- Confirm that chromatically altered tones are chord tones
- Identify the relationship between the chromatically altered chord and the chord that follows. If the chromatically altered chord is the dominant of the chord of resolution, the altered chord is a secondary dominant.

Example:

In m. 1, bt. 2 (key of C), F# (#4) is part of a D⁷ (Mm7). D⁷ is a secondary dominant chord (V⁷/V) that resolves to G (V).

Bach: Ach Gott und Herr

The musical notation shows a short excerpt in C major. The bass line has a figured bass with the following notes and figures: C (I), G (V), F# (V/V #3), and G (V). The treble line has a melody with a half note G, a quarter note A, a quarter note B, and a half note C. The F# in the bass line is the leading tone of the secondary dominant D7, which resolves to the G in the next measure.

C: I V V/V #3 V

Find secondary chords in the chorale below.

1. Bach Christus, der ist mein Leben

Altered pitches: Eb (b7), B (#4). Accidentals added to the figured bass reflect chromatic alterations in the score. Roman numerals reflect implied key (V/V, V/IV). The third phrase could be analyzed in C. Label cadences in F (PAC, IAC, HC).

Bach: Christus, der ist mein Leben

The musical notation shows a chorale in F major. The bass line has a figured bass with the following notes and figures: F (I), C (V), Eb (V/IV IV), F (V), C (I), G (IV), F (I), B (ii vii° I), F (V), C (I), F (V/V), C (V), F (vi), C (iii), F (vi), B (V/V V), C (I), F (ii vii° I), F (ii), C (V), F (I). The treble line has a melody with various intervals and accidentals. The figured bass includes chromatic alterations: Eb (b7) and B (#4). Roman numerals reflect implied key (V/V, V/IV). The third phrase could be analyzed in C. Label cadences in F (PAC, IAC, HC).

F: I V V/IV IV V I IV I ii vii° I V I V/V V vi iii vi V/V V I ii vii° I ii V I

C: IV V I ii vi ii V I

2. Bach: Ach Gott und Herr

Altered pitches: F# (#4), Bb (b7), G# (#5). Accidentals added to the figured bass reflect chromatic alterations in the score. Roman numerals reflect implied key (V/V, V/IV, V/vi). The second phrase could be analyzed in G. Label cadences in C (PAC, HC).

Bach: Ach Gott und Herr

C: I V V/V V V/IV IV vii° I V V/V V V/V V vi V/V I vii° I V I V/V V I V/V vii°/vi vi I IV V I

G: IV I V I V ii V I

Spelling Secondary Dominants:

When a secondary dominant resolves, its chromatically altered tone(s) give the impression of being in a new key. This concept was first introduced with the harmonic minor scale where the raised seventh scale degree (leading tone) formed a major chord on V, and a diminished chord on vii°. The addition of the leading tone is a powerful means to imply a new key.

As we have seen in musical examples studied up to this point, secondary dominants are common, and it will benefit our study to practice spelling them.

Examples:

For each the key is given. First determine the dominant of the chord of resolution (V, ii, iii etc.). Spell the secondary dominant in root position, then write it on the staff using figured bass given. Chromatic accidentals in the figured bass produce secondary chords.

1. Major keys:

F: V/V V Bb: V/ii ii Eb: V/iii iii Ab: V/IV IV C: V/vi vi G: V/V V D: V/ii ii A: V/iii iii E: V/IV IV

2. Minor keys:

Dm: V/V V Gm: V/VII VII Cm: V/VI VI Fm: V/iv iv Am: V/III III Em: V/V V Bm: V/VI VI F#m: V/iv iv C#m: V/III III

3. Given Roman numerals and bass pitches, write the appropriate secondary dominant chords (Mm7) on the staff and provide the correct figured bass with chromatic alterations for all chords.

F: V/V V Gm: V/V V Eb: V/ii ii Ab: V/IV IV Am: V/V V G: V/V V Bm: V/III III F#: V/VII V E: V/V V

Tonicization:

Secondary dominants tonicize the chord to which they resolve calling attention to it through the addition of chromatic pitches. In essence, the term tonicization describes our perception of the function of a secondary dominant chord. Observe this the following excerpts (Play with and without chromatic alterations).

Bach: Puer natus in Bethlechem

C: I

V^4_3 /vi vi

Bach: O Ewigkeit, du Donnerwort

F: V V/vi vi

Bach: An Wasserflüssen Babylon

G: IV $\overset{4}{V_2/IV}$ $\overset{6}{IV}$ $\overset{b5}{V/IV}$ IV V vi $\overset{7}{V/V}$ V I — IV $\overset{6}{V} \overset{6}{V/ii}$ ii

Diatonic sequence of chords and secondary dominants:

In the diatonic sequence of chords: I-IV-vii^o-iii-vi-ii-V-I, each chord is related by an ascending fourth, or descending fifth; the same interval as V-I.

[illegible]

Secondary dominant chords:

Secondary dominant chords have been added to the diatonic sequence of chords showing tonicizations that are possible in a major key.

Diatonic chords are given followed by a secondary dominant with the same root.

Chromatic alterations are reflected in the figured bass. All of these are common except $V^7/bVII$.

The musical score for 'The Rose Tree' in B-flat major is presented in two systems. The first system contains the first four measures, and the second system contains the next four measures. The chords and their figured bass notation are as follows:

Measure	Chord	Figured Bass
1	B \flat : I	
2	V/IV IV	$\flat 7$
3	V/ \flat VII	
4	\flat VII	
5	vii $^{\circ}$	
6	V/iii	7 $\sharp 5$ $\sharp 3$
7	iii	
8	V/vi	$\flat 7$ $\sharp 3$
9	vi	
10	V/ii	7 $\sharp 3$
11	ii	
12	V/V	7 $\sharp 3$
13	V	
14	I	

Examples:

Telemann: Trio Sonata

Observe how the secondary dominant of measure three intensifies the motion of the Pd chord that precedes it (bass: A-A[#]-B).

Telemann: Trio Sonata

E: I ii⁷ V⁷ I IV ii V/V⁵ V IV⁶ V⁵ V⁷ I
T Pd D T Pd (D/D) D Pd D V T

Clementi: Sonatina

The opening phrase unfolds a T-D-T motion while the second phrase moves to the key of the dominant using, T-Pd-D-D/D-D. Altered pitch C# (#4). The secondary dominant chord tonicizes V and is part of an expansion of that chord: D-D/D-D.

Clementi: Op. 36, No. 2

Chord symbols for Clementi: Op. 36, No. 2:

Measure	Chord	Altered Pitch
1	G: I	T
2	V ⁶	D
3	I	T
4	vi ⁶	Pd
5	V ⁴	D
6	V/V [#]	D/D
7	V	D

Beethoven: Op. 2, no. 2, Scherzo

In the following, the secondary dominant before the first cadence intensifies the motion towards the first cadence. The entire phrase is: T-D/D(Pd)-D-T. Altered pitch D# (#4).

Beethoven: Op. 2, no. 2, Scherzo

Chord symbols for Beethoven: Op. 2, no. 2, Scherzo:

Measure	Chord	Altered Pitch
1	A: I	T
2	I	T
3	V ^{3/V}	D/D (Pd)
4	V	D
5	V ⁷	D
6	I	T

Schumann: Album for the Young: Erster Verlust

In the following note the introduction of the secondary dominant intensifies the ii chord that precedes it T-Pd-D/D-D. Altered pitch A# (#4).

Schumann: Album for the Young, Erster Verlust

Chord symbols for Schumann: Album for the Young, Erster Verlust:

Measure	Chord	Altered Pitch
1	Em: i	T
2	iv ⁴	Pd
3	i	T
4	ii ^o V ⁵	Pd D
5	i	T
6	ii ^o V/V	Pd D/D (Pd)
7	V	D

In the preceding examples note the prevalence of #4 scale degree for all tonicizations of V. The following example shows tonicizations of chords other than V. Note altered pitches are all leading tones of the tonicized key.

Bach: Ermuntre dich. Mein schwacher Geist:

Altered pitches: C# (#4), D# (#5), G# (#1), A# (#2). Accidentals added to the figured bass reflect chromatic alterations in the score. Roman numerals reflect implied key (V/V, V/IV, V/vi etc.). Play each phrase of the chorale and listen for tonicization. Do some phrases sound as though they are in a key other than G?

Label cadences in G (PAC, HC). Label cadences on chords other than I, V using the chord at the cadence: "cadence on ii, vi" etc. Phrases three and four can be analyzed in Am, and Em respectively.

Chords with arrows (↓) are vii^{o7} substituted for a secondary dominant.

Bach: Ermuntre dich. mein schwacher Geist

G: I IV⁶ V I V/V V⁶ V⁴ V⁷/V V V³/vi IV vii^o I IV V² I V⁴⁻³ V⁷ I V vii^{o3}/ii ii vii^o/vi

Am: vii^o i vii^o/v

G: vi V⁷/ii ii vi V/vi vi V³/ii ii vii^o/iii iii V/vi vi V² I⁶ I⁵ IV vii^o vi V³/V V⁷ V I IV V IV vii^o I ii V I

Am: v V i Em: i V i V/iv iv vii^o/v v V i

Formal Graph:

What role do cadences in Am and Em play? Examine how the HC and PAC in the last four measures bring about tonal closure.

Phrase	Phrase 1	Phrase 2	Phrase 3	Phrase 4	Phrase 5	Phrase 6
Cadence	HC	PAC	PAC	PAC	HC	PAC
Key	G	G	Am	Em	G	G
Context	D	T	Pd	Pd	D	T
Length	mm. 1-2	mm. 3-4	mm. 5-6	mm. 7-8	mm. 9-10	mm. 11-12
Highlights	HC tonicized V/V	Last 1/4 of phrase transitions to Am.	Secondary chords tonicize E and Am	Secondary chords tonicize Em: iv, V, i	HC tonicized V/V	Bass: 3-4- 5-6-7-1-4- 5-5-1

1. Part-write using the Rule of the Octave or the Harmonic Model for the given bass or soprano. Follow part-writing rules. Analyze your work with roman numerals and figured bass.

Exercise 1.1: A musical score in A major (two sharps) and 4/4 time. The bass line is given, starting on A4 and moving stepwise up to E5, then down to D4. The soprano line is empty for part-writing.

A:

Exercise 1.2: A musical score in A major (two sharps) and 4/4 time. The soprano line is given, starting on A4 and moving stepwise up to E5, then down to D4. The bass line is empty for part-writing.

A:

Exercise 1.3: A musical score in B-flat major (two flats) and 3/4 time. The bass line is given, starting on B-flat3 and moving stepwise up to G4. The soprano line is empty for part-writing.

B \flat :

Exercise 1.4: A musical score in G major (one sharp) and 4/4 time. The soprano line is given, starting on G4 and moving stepwise up to E5, then down to D4. The bass line is empty for part-writing.

G:

Exercise 1.5: A musical score in G major (one sharp) and 4/4 time. The bass line is given, starting on G3 and moving stepwise up to E4, then down to D3. The soprano line is empty for part-writing.

G:

2. Analyze each of these cadences with roman numerals and figured bass. Identify each cadence as Half (HC), Perfect Authentic (PAC), or Imperfect Authentic (IAC).

B \flat C: G: cm:

3. Analyze the following excerpt using Roman numerals and figured bass. Label cadences at each fermata.

4. Write the cadences noted below in SATB.

Deceptive Plagal

G: Eb:

112 Assignment 2: 1.4-1.6

1. Fill in the inner voices and correctly resolve pitches in the following D-T progressions. Analyze the chords with Roman numerals.

gm: # F: 6 4 2 D: 7 em: 6 5 3

2. Part-write the following T-D-T progressions. Analyze the chords with Roman numerals:

E: 6 4 6 5 7 6 4 3

3. Part-write the appropriate second inversion chord for each example below. Add Roman numerals as needed:

cm: i #6 4 3 6 4 7 5 #3 i 6 4 i 6 4

4. Given the following bass pitches and figured bass, *determine the key and correctly spell* and *resolve* the given chords.

ii 6 5 V iv V b ii 6 5 V IV V

4. Part-write the following examples using Rule of the Octave, or the Harmonic Model and the given bass or soprano. Use substitutions (secondary, tertiary) dictated by the Harmonic Model especially in cases when such substitutions generate T-Pd-D-T from T-D-T progressions. Use only passing, or cadential second inversion chords. Analyze your solution using Roman numerals and figured bass. Label cadences.

Exercise 1: Cm: (C minor). The bass line is given in 4/4 time, starting on C4 and ending on C3. The melody line is empty. Above the staff, there are two fermatas indicating the start and end of the exercise.

Cm:

Exercise 2: Dm: (D minor). The bass line is given in 4/4 time, starting on D4 and ending on D3. The melody line is empty. Above the staff, there are two fermatas indicating the start and end of the exercise.

Dm:

Exercise 3: F: (F major). The soprano line is given in 4/4 time, starting on F4 and ending on F4. The bass line is empty. Above the staff, there are two fermatas indicating the start and end of the exercise.

F:

Exercise 4: C: (C major). The soprano line is given in 4/4 time, starting on C4 and ending on C4. The bass line is empty. Above the staff, there are two fermatas indicating the start and end of the exercise.

C:

1. For each example resolve the implied Dominant chord to the tonic of the given key.

- Voice the chord in 4 voices
- Resolve pitches to members of the tonic chord
- Analyze the result with roman numerals and bass figures

C: V⁷ I C: dm: F: G: G:

2. Label the circled tones as P=passing, N=Neighboring, C.S.=Chordal skip. Analyze chords implied by the bass voice in the given key, include roman numerals and figured bass.

C: I⁶ I D: B^b cm:

3. Label the following suspensions using intervals (e.g. 4-3). Analyze implied chords and provide roman numerals and figured bass.

E: I V 4-3 gm: em: f#m:

4. Write and resolve the following secondary dominant chords in SATB.

Key signatures: G major, A-flat major, A minor, F major, B minor, F-sharp minor.

Chord symbols below the staff:

- G: V7/V V
- A \flat : V6/V V
- am: V4/V V6
- F: V7/ii ii
- bm: V4/V V
- f \sharp m: V/III III

5. Analyze the following chorale with Roman numerals and figured bass. Label secondary dominant chords as V/x with proper inversions and chromatic alterations to the figured bass if required. Circle and label all non-chord tones. Label cadences.

Bach: Ach Gott und Herr

C:

Bach: Christus, der ist mein Leben

F:

Music 112

Unit Two:

2.1 Secondary Leading Tone Chords

2.2 Closely Related Keys

2.3 Analysis of Keyboard Textures

2.4 Secondary Dominants in Musical Contexts

Unit Two Assignments

Secondary Leading Tone Chords:

Secondary Leading Tone Chords are diminished triads, $dm7$ or $dd7$ chords that function as leading tone chords (vii°) outside a work's original key. To do this they employ accidentals; typically the leading tone of the implied key, the chordal seventh of the secondary leading tone chord, or both.

Example:

Key of Cm . $F^{\#}$ ($\#4$), A ($\#6$) form an $F^{\#o7}$ is a secondary leading tone chord (vii^{o7}/vii°) that resolves to G (V).

Beethoven: Op. 13, Piano Sonata

Cm: i 6 V i vii°/V V

Resolutions of the secondary leading tone seventh chord to V :

1. Chromatically altered pitch ($\#4$, leading tone) resolves up.
2. Chordal seventh resolves down. In minor this tone is in the key, in major the chordal seventh of the $dd7$ is chromatically altered.
3. Do not double tendency tones in the chord of resolution (e.g. V).
4. Keep $d5$ - $P5$ in the inner voices (see below).

Eb : $vii^{\circ7}/V$ V $vii^{\circ7}/V$ V vii°/V V Cm : $vii^{\circ7}/V$ V vii°/V V vii°/V V vii°/V V vii°/V V

Strategy for identifying secondary leading tone chords:

- Identify the key of the piece
- Look for accidentals foreign to the key
- Confirm that chromatically altered tones are chord tones
- Identify the relationship between the chromatically altered chord and the chord to which it resolves. The chromatically altered chord is a secondary leading tone if it is the vii° of the chord of resolution,

Examples:

Clementi: Op. 36, no. 3, mvt. I:

Altered pitches: G# (#5), C# (#1). Accidentals added to the figured bass reflect chromatic alterations in the score. Roman numerals reflect implied key ($\text{vii}^\circ/\text{vi}$, $\text{vii}^\circ/\text{ii}$). Label cadence in C (PAC).

Clementi: Op. 36, no. 3, mvt. I

C: I V I V ⁷ ⁴ ² iii vii[°]/vi vi vii[°]/ii ii ⁶ ⁵ ³ I ⁴ V I

Clementi: Op. 36, no. 3, mvt. I:

This excerpt occurring later in the work above is similar to the preceding, but contains many more chords of secondary function. It also contains an $\text{It}+6$ chord (arrow). Which accidental would be added if this were a secondary leading tone seventh?

Altered pitches: C# (#1), F# (#4), D# (#2), G# (#5). Accidentals added to the figured bass reflect chromatic alterations in the score. Roman numerals reflect implied key ($\text{vii}^\circ/\text{vi}$, $\text{vii}^\circ/\text{ii}$). Label cadence in C (HC).

Clementi: Op. 36, no. 3, mvt. I

C: iii vi ⁴ ² ii ⁶ ^{#6} vii[°]/ii ii ⁷ ^{#3} V/V V It ⁺⁶ ^{#3} ⁴ ² vi ⁶ ⁶ ⁴ vi V/vi vi vii[°]/ii ii ⁶ ⁵ ³ ⁶ ⁷ vii[°]/V V

Schumann: Album for the Young (Op. 68), Soldaten Marsch.

Altered pitch C# (#4). Notice that the secondary leading tone chord precedes the secondary dominant at the cadence.

Schumann: Soldatenmarsch

G: I ⁶ IV I ⁶ vii^o/V V ⁷ V/V V

Haydn: Hob. VI/36

The following example includes secondary leading tone and secondary dominant chords. In this excerpt, secondary dominants follow secondary leading tone chords intensifying motion to the tonicized key. Altered pitches: B# (#7), D (b7), E# (#3), Fx (#4), A# (#6). Accidentals added to the figured bass reflect chromatic alterations in the score. Roman numerals reflect implied key (vii^o/iv, vii^o/V).

Haydn: Hob. VI/36

C#m: i V³ i ⁶ vii^o/iv iv V⁷/iv iv vii^o/V V V/V V[#] i V⁶/iv iv

Bach: Valet will ich dir geben:

Altered pitches: A# (#5), G# (#4), E# (#2), D# (#1) C (b7). Accidentals added to the figured bass reflect chromatic alterations in the score. Roman numerals reflect implied key (vii^o/iv, vii^o/V).

Bach: Valet will ich dir geben

D: I ——— ⁶ ⁵ ³ vi⁶ vii^o IV I ——— ⁷ ⁴ ² vii^o/vi vi vii^o/V V I ——— vi ⁶ ⁷ ⁵ V/V V ^{#6} V/iii iii ———

D: vi vii^o/V V ⁶ vi ⁵ V/V[#] V ——— I ⁶ ⁴ ³ V/IV IV vii^o I iii^o V/ii ii V/ii V/IV IV vi ⁶ ⁵ ³ ii V ⁷ I

A: ii vii^{o6} I ii V I Em: VII ii^o V i V

Tonicization:

Secondary dominants and leading tone chords tonicize chords other than the tonic in a piece. A single secondary chord (V or vii^o) fulfilling its dominant function (V-x, vii^o-x) is all that is required for a tonicization.







Modulation:

When a piece moves to a key other than the tonic, it has modulated. Modulations often employ chords common to both keys (common or pivot chord), a tonicization, and cadence in the new key.

In sections of works that do not employ well-articulated cadences, a modulation may occur if secondary chords are present and the new key persists for some time. In this case the modulation is context dependent. There are various modulation techniques but for the most part we will focus on common (pivot) chord modulation to closely related keys.

Closely related keys:

Closely related keys share 5-7 common tones with the original key. The figure below shows closely related keys to C Major (I-IV-V relative i-iv-v).

Subdominant (IV)	Tonic (I)	Dominant (V)
		
Relative minor (ii)	Relative minor (vi)	Relative minor (iii)
		

Tonal Plan:

The tonal plan is an overview of cadences and keys that make up a piece of music. Many musical forms use specific sequences of keys; and knowing the tonal plan facilitates making quick and accurate judgments about a piece.

Examples:

Formal graphs will be used to list features in the works that follow. Phrases, cadences, keys, context/function, proportions, and highlights are listed. Thematic elements, and structural functions will be added later. The tonal plan is represented by both *key* and *context* (T, D, Pd) on the graph.

Bach: Valet will ich dir geben

Figured bass notation for the two systems:

System 1: D: I — 6 5 3 vi³ vii^o IV I — 7 4 2 vii^o/vi vi vii^o/V V I — vi V/V[#] V V/iii iii —

System 2: D: vi vii^o/V V⁶ vi⁶ V/V⁷ V — I 6 4 3 V/IV IV vii^o I iii^o V/ii ii V/ii V/IV IV vi ii V⁷ I

A: ii vii^{o6} I ii V I Em: VII ii^o V i V

Phrase	Phrase 1	Phrase 2	Phrase 3	Phrase 4	Phrase 5	Phrase 6
Cadence	Plagal	PAC	IAC	PAC	HC	PAC
Key	D	D	F#m	A	Em	D
Context	T	T	Pd	D	Pd	T
Length	mm. 1-2	mm. 3-4	mm. 5-6	mm. 7-8	mm. 9-10	mm. 11-12
Highlights	D: T-D-Pd-T	vii ^{o7} /V tonicizes cadence. D: T-Pd-Pd-D-D-T	D: T-Pd-D-D-Pd-Pd (F#). Tonicized cadence.	A: Pd-D-T-Pd-D-T. First three tonicized keys arpeggiate a D chord (D-F#-A).	HC tonicizes ii	D: Pd-Pd-Pd-Pd-D-T. A series of Pd chords prepares final cadence. Soprano: 5-4-3-2-1.
The tonal plan unfolds T-T-Pd-D-Pd-T. Phrase 5 HC (V/ii): the tonicized key mirrors the plagal cadence of phrase one on a structural level (Phrase 5-6: Pd-T; Phrase 1: Pd-T plagal cadence).						

In common chord modulation, one chord common to both keys serves as a pivot to the new key. This chord typically precedes a tonicization. A modulation is achieved when there is a secondary chord and a cadence in the new key.

Also note functional analyses (e.g. T-D-T) were successively reduced to show relationships between phrases in each piece (e.g. T-Pd-D-T becoming T). The reductions show how tonality unfolds over the course of several phrases.

Mozart: K. 284, mvt. III

The musical score is in 4/4 time, key of D major. It consists of three systems of music. The first system (mm. 1-4) starts with a piano (*p*) dynamic and ends with a forte (*f*) dynamic. The second system (mm. 5-8) begins with a repeat sign and a piano (*p*) dynamic, followed by a forte (*f*) dynamic. The third system (mm. 9-12) starts with a piano (*p*) dynamic and ends with a forte (*f*) dynamic. The score includes phrasing slurs and a 'modulate' instruction at the end of the first system. Harmonic analysis is provided below the staff, indicating chords in both D and A major.

Harmonic analysis for the first system (mm. 1-4):

D: V I vi ii⁶ V⁷ I ii⁶ V⁶⁻⁵ 4-3 I⁶ vi⁶

A: ii

Harmonic analysis for the second system (mm. 5-8):

D: V/V⁷ 6⁵ V vi⁶ V/V⁶⁻⁵ 4-3 V V I (IV? ii?)

A: V I ii V I

Harmonic analysis for the third system (mm. 9-12):

D: V I V vii⁶/V V V I vi ii⁶ V⁷ I ii⁶ V⁷ 4-3 I

Phrase	Phrase 1	Phrase 2	Phrase 3	Phrase 4
Cadence	HC	HC (Authentic cadence in A perceived as dominant of D)	HC	PAC
Key	T-D	A	D	D
Context	D	D (dominant of D)	D	T
Length	mm. 1-4	mm. 5-8	mm. 9-12	mm. 13-17
Highlights	D: (T)-D-T-Pd-Pd-D-T-Pd-D	V/V tonicized cadence. A: ii-V-I-ii-V-I. Harmony (T-Pd-D-T) and melody (5-1-6-4-3-5-4-2-2-1) mm. 7-8, 15-16.	D: Pd-D-D-T-Pd-Pd-D-T-D-D-D. Melodic material in this phrase does not appear elsewhere in the piece.	D: D-T-Pd-Pd-D-T-Pd-D-T
Cadences unfold (T)-D-D-D-T. Phrase 2 HC (V) modulates to the key of A beginning in m. 5 with Bm common chord (D: vi; A: ii); then moves back to D in m. 9 through a series of secondary dominants. Though the cadence in m. 8 is a PAC in A, it is shown as a HC in D. This indicates the role of the cadence and key in the larger tonal plan: T-D-D-D-T. This two part work employs a common tonal plan, I-V-V-I.				

Keyboard textures:

The student must understand the harmonic implication of keyboard textures.

Bass voice in keyboard textures:

The bass voice dictates harmony and in much music. In keyboard music, the bass voice is often the lowest note of a left-hand arpeggio. Bass pitches often occur at the beginning of an arpeggio figure, and lines may move root to root, employ arpeggios, chordal skips, or step progressions.

In the first example, tonic and submediant chords are in root position. In the second, the tonic is followed by the dominant in first inversion.

Mozart: K. 284 Clementi: Op. 36

D: I vi G: I V⁶

In the next example the first pitch of each left-hand arpeggio generates:

1-#3-4-5-6-5-4-5-1 (chordal skip-step progression).

Beethoven: Op. 13, Piano Sonata, mvt. III

Cm: i V ⁵ /iv iv V ⁷ VI V ⁶ ₄ /iv iv V ⁴ i

Pedal tones in the bass imply a major or minor triad depending on the key.

Clementi: Op. 36

or

In this example a tonic pedal is harmonized T-Pd-T (mm. 1-4). A rule of the octave harmonization follows in mm. 5-6. And in mm. 7-8 Ab (6) and F# (#4) embellish the dominant. The linear ascent in the bass: 1—1-2-3-4-5-6-#4-5-1 dictates the harmony of these measures.

Beethoven: Op. 13, Piano Sonata, mvt I

Allegro

Chord progression (Cm): i 6 4 iv V/iv iv i 7 V/iv iv 7 V/iv iv i 6 4 V 3 i 6 ii 6 i 4 Gr⁺⁶ 7 vii^o/V 7 V i

The excerpt below shows a dominant pedal. An IAC occurs in m. 22 where the tonic chord appears in second inversion. A weak cadence implies continuation.

Beethoven: Op. 2, no. 1

(20)

Chord progression (Ab): V 7 7 I 4

Here a tonic pedal is used for the first three chords. The texture changes into two voices at the end of m. 2, and the harmonic rhythm speeds up at the end of m. 3 where the VI embellishes the dominant chord. The texture of the final measure mirrors the first.

Varied textures are common in piano music from the 18th century onward. Note-to-note connections in the bass reveal harmonic progressions.

Beethoven: Op. 13, Piano Sonata, mvt. III

Chord progression (Cm): i ——— (i 6 V 6 6 i vii^o i) V 6 VI 7 V

In the following, the lowest bass pitch of an arpeggiated motive generates a rule of the octave harmonization embellished by a cadential 6/4 in m. 39.

Beethoven: Op. 2, no. 1

Ab: I⁶ *sf* ii⁶ *sf* I⁶ *sf* V⁴₂ I

This excerpt is chromatic, but the motion in the bass clearly connects the tonic, Db³ to the dominant, Ab². Overall the progression is T-Pd-Pd-Pd-D-T. The chord preceding the final tonic embellishes it.

Chopin: Op. 27, no. 2, Nocturne

Db: I vii⁶₅/vi ii⁶₄ ii⁶₄ V⁷ ii⁶₇ (emb) I

Secondary Dominants in Musical Contexts:

- Analyze harmony, cadences, and non-chord tones.
- Complete a formal graph noting key relationships, proportions and large-scale function of phrases.
- Part-write select phrases using a given bass or soprano. Write melodies using accompaniments, or bass progressions found in the excerpts.

Bach: Nun danket alle Gott

Harmonic analysis for the three systems:

System 1 (Key of A):
 A: I 6 IV 6 I vi 6 V 5 I V 4 2 I 6 V 7 I V
 Bass line: Plagal, PAC

System 2 (Key of A):
 A: V 6 I 6 V
 E: I IV I
 Bass line: Plagal, PAC

System 3 (Key of E):
 A: IV vii°/ii ii 6 ii°/ii V/ii ii
 Bm: III vii° i ii° V i
 Bass line: IAC, PAC

Phrase	Phrase 1	Phrase 2	Phrase 3	Phrase 4	Phrase 5	Phrase 6
Cadence	Plagal	PAC	Plagal	PAC	IAC	PAC
Key	A	A	E	E	Bm	A
Context	T	T	D	D	Pd	T
Length	mm. 1-2	mm. 3-4	mm. 5-6	mm. 7-8	mm. 9-10	mm. 11-12
Highlights	Bass voice outlines thirds. A: T-Pd-T. *	A: Pd-D-T-D-T	Soprano uses same melody as phrase 1 (key of E). Bass voice same as m. 1. E: T-Pd-T. *	E: T-Pd-Pd-Pd-D-T. *	Bm: Pd-D-T-Pd-D-T. *	A: T-D-T-Pd-Pd-D-T
Tonal plan T-T-D-D-Pd-T: I-I-V-V-ii-I. Cadences of Phrases 3-4 mirror those of 1-2, D and T respectively.						

*Part-write using the bass of the third-fifth phrases, and/or the soprano of Phrases 1, 3.

Clementi: Op. 36, no. 3 (mm. 1-12)

C: I *sim.* IV⁴ I
 5 *p* C: V⁷ $\frac{4}{2}$ iii (I) vi $\frac{4}{2}$ ii⁶ V⁴ ⁶ 7 I V I
 9 *cresc.* C: V⁷ $\frac{4}{2}$ iii vii⁰/vi vi vii⁰/ii ii⁶ V⁴ $\frac{6-5}{3}$ I
 (Plagal) IAC PAC

Phrase	Phrase 1	Phrase 2	Phrase 3
Cadence	Plagal	IAC	PAC
Key	C	C	C
Context	T	T	T
Length	mm. 1-4: 2+2	mm. 5-8: 1+1+2	mm. 9-12: 1+2+1
Highlights	T-Pd-T expansion using pedal 6/4. Rhythmic material mm. 3-4 foreshadows phrase 2. *	Rhythmic material suggests 1+1+2 scheme. Last measure (m. 8) mirrors the first (m. 5).	Similar rhythmic scheme as phrase 2. Chords vi, and ii tonicized. High and low register used at PAC. V-I used cadential 6/4. PAC on accented beat.
<ul style="list-style-type: none"> Tonal Plan T-T-T: I-I-I (no modulation). First phrase expansion T-Pd-T generates a plagal cadence. Most conclusive cadence at the end of the three-phrase structure. Tonicization and register used to intensify final cadence (low-high). Bass voice octave leaps on the dominant and tonic (mm. 11-12). Melody arpeggiates chords, emphasizes single chord tones, or connects them with conjunct motion. 			

*Write a melody that imitates the first phrase (arpeggios, scale degrees, figures) by re-ordering arpeggios, changing chord members, and altering scale figures over the given accompaniment.

Haydn: Hob. XVI:3, mvt. III

Menuetto

C: I 6 IV I 6 V 5 I V 6 I V 6 I V 4/V (5) V

C: vii^o 3/ii ii 6 V 4 I 6 V 7 I 4 V 6-5 4-3

C: I 6 IV I 6 V 5 I IV 4 I IV 4 I ii 6 V 6-5 4-3 I

Phrase	Phrase 1	Phrase 2	Phrase 3
Cadence	PAC	HC	PAC
Key	C-G	C	C
Context	T-D	Pd-D	T
Length	mm. 1-8 2+2+1+1+2	mm. 9-16 2+2+2+2	mm. 17-24 2+2+1+1+2
Highlights	F# is introduced as a NCT in m. 4, and is implied at the cadence. C: T-T-Pd-T-D-T-D-T-D-T-D/D-D. The phrase modulates to V.	Supertonic is tonicized. Dominant pedal used in last four measures of the phrase. Soprano mm. 13-14 (5-4; 4-3) is compressed in mm. 15 (5-4-3). Last phrase cadential 6/4 and soprano 3-2. C: Pd-Pd-D-T-D-T-T-D.	Material of the first phrase is now in the tonic (mm. 4-8; 20-24). C: T-T-Pd-T-D-T-Pd-T-Pd-T-Pd-D-T
	<ul style="list-style-type: none"> The first phrase modulates to the dominant, which remains the focus of the second phrase. The last phrase is entirely in the key of the tonic. Tonal plan: T-D-Pd-D-T: I-V-ii-V-I. Triplet figure (mm. 6-7; 22-23) signals the ensuing cadence. Bass voice leaps an octave at both PAC's, (mm. 7-8, 24). Cadence (m. 16) concludes dominant pedal in phrase 2 (mm. 13-16). 		

Bach: Ein' feste Burg is unser Gott

D: I vi ⁴ I ⁶ vii⁰ ⁶ I V/V ⁷ V vii⁰/V vii⁰/vi ⁶ vi ⁶ iii IV vii⁰ I V ⁴⁻³ I A: I

D: iii ⁶ V/V vi ⁶ V I V/V V I ⁶ IV V I iii vi V ⁶ vi⁵ V/V V ii A: vi V ii I IV V I A: vi ii I ii V I Em: i

D: IV ii vii⁰/ii V/ii ⁶ ii V/ii vi iii IV vii⁰ I IV ⁶ V ⁵ I ii ⁶ V ⁷ I Em: VI i vii⁰ V i V

Phrase	Phrase 1	Phrase 2	Phrase 3	Phrase 4	Phrase 5	Phrase 6	Phrase 7
Cadence	HC	PAC	PAC	PAC	PAC	HC	PAC
Key	D	D	A	D	A	Em	D
Context	D	T	D	T	D	Pd	T
Length	mm. 1-2	mm. 3-4	mm. 5-6	m. 7	m. 8	mm. 9-10	mm. 11-12
Highlights	Tonicized HC. D: T-Pd-T-D-T-D-D. Bass descends T-D. *	Tonicized V, vi. D: Pd-D-T _{sub} -Pd-Pd-D-T-D-T. Bass ascends D-T. *	A: Pd-Pd-D-Pd-T-Pd-D-T.	D: T-Pd-D-T. Short phrase in tonic key.	A: T _{sub} -Pd-T-Pd-D-T. Secondary dominant comes just before the cadence, which makes the modulation sound abrupt.	Em: T-Pd-T-D-D-T-D.	D: T _{sub} -Pd-Pd-D-T-Pd-D-T-Pd-D-T. **
	T _{sub} is a tonic substitute. The tonal plan unfolds: (T)-D-T-D-T-D-Pd-T: (I)-V-I-V-I-V-ii-I. Modulations are considered in reference to the tonic of the work, thus a PAC in A is a dominant in reference to the key of D.						

*Part-write the bass of the first two phrases.

**Part-write the bass of the last two measures.

Bach: Ach Gott und Herr

C: I V V/V V V/IV IV vii° I V V/V V V/V V vi V/V V I vii° I V I V/V V I V/V vii°/vi vi I IV V I

G: IV I V I V ii V I

Phrase	Phrase 1	Phrase 2	Phrase 3	Phrase 4	Phrase 5	Phrase 6
Cadence	HC	IAC	PAC	HC	HC	PAC
Key	C	C	G	C	C	C
Context	T-D	T	D	D	D	T
Length	m. 1	m. 2	mm. 3-4	m. 5	m. 6	mm. 7-8
Highlights	Dominant is tonicized. T-D-D-D	Subdominant is tonicized. Leading tone triad precedes tonic at the cadence. Pd-Pd-D-T	The phrase modulates to the key of G: Pd-T-D-T-D- Pd-D-T	The tonic key returns. T-D-T-D	HC is tonicized. D-T-D-D	Submediant is tonicized. T-D-Pd-Pd- T-Pd-D-T*
	<ul style="list-style-type: none"> The tonal plan unfolds (T)-D-T-D-D-D-T. HC and PAC in G prolong the dominant for most of the chorale. Tonicization of the submediant in the last phrase delays the arrival of the tonic until the final cadence. 					

*Part-write using the bass voice of phrase 6.

Common Chord Modulation without cadences.

The next example is from the development section of Mozart's Piano Sonata in Bb, K. 333, mvt. 1 (mm. 64-93). In a development there are few or weak cadences, and key areas are defined primarily by secondary chords which may or may not resolve to a tonic as is the case in the Bb section of this excerpt (mm. 75-78). Compare the bass voice of this excerpt with any of the preceding examples and you will see that it is fairly static and does not employ any of the common bass voice cadential figures.

Mozart: K. 333, Mvt. 1 (mm. 71-80)

Chord annotations for the musical score:

- Phrase 1 (mm. 71-72): Fm: i
- Phrase 2 (mm. 72-75): Cm: iv, IAC, Cm: (V)
- Phrase 3 (mm. 75-78): Bb: ii, iv⁶, V⁷, Gm: VII, V⁶
- Phrase 4 (mm. 78-80): i, IAC

Phrase	Phrase 1	Phrase 2	Phrase 3	Phrase 4
Cadence	PAC	IAC	none	IAC
Key	Fm	Cm	Bb	Gm
Context	T	T	T	T
Length	mm. 71-72	mm. 72-75	mm. 75-78	mm. 78-80 (86)
Highlights	F minor (parallel minor of F) appears at PAC. Fm: T-Pd.	Fm common chord. Cm: Pd-Pd-D-D-T. Tonic chord in second inversion at cadence (weak IAC).	Cm common chord. IV chord is minor (borrowed). Bb: Pd-Pd-D. No cadence.	F common chord. Gm: Pd-D-T. Gm persists until m. 86 (not shown).
	<ul style="list-style-type: none"> Tonal plan (Development: mm 64-93): F/Fm: (I)-i-v-iv-ii-(I) prolongs F; the dominant of Bb. Phrase 2: Tonic chord at cadence in second inversion and on beat two. Phrase 3: No cadence in Bb. F common chord chromatically altered to become the dominant of Gm. Phrase 4: IAC arrival delayed by a 9-8 suspension. Bass voice is static for this excerpt F-G-Gb-F-F#-G and does not feature any of the common bass cadence figures: 5-1, 5-5-1, 4-5-1, or 2-5-1. 			

112 Assignment 4: 2.1-2.2

1. Given Roman numerals and bass pitches, write the appropriate secondary dominant chords (Mm7) on the staff and provide the correct figured bass with chromatic alterations for all chords.

Figured bass for exercise 1:

F: V/V V Gm: V/V V Eb: V/ii ii Ab: V/IV IV Am: V/V V G: V/V V Bm: V/III III F#m: V/VII V E: V/V V

2. Spell and resolve the following secondary leading tone chords:

Figured bass for exercise 2:

F: $\text{vii}^{\flat 6}/\text{V}$ V Bb: $\text{vii}^{\flat 7}/\text{ii}$ ii Cm: $\text{vii}^{\flat 0}/\text{iv}$ iv Fm: $\text{vii}^{\flat 0}/\text{III}$ III C: $\text{vii}^{\flat 0}/\text{V}$ V

Figured bass for exercise 3:

G: $\text{vii}^{\flat 6}/\text{vi}$ vi Bm: $\text{vii}^{\flat 0}/\text{III}$ III A: $\text{vii}^{\flat 0}/\text{V}$ V C#m: $\text{vii}^{\flat 0}/\text{iv}$ iv Eb: $\text{vii}^{\flat 7}/\text{ii}$ ii

112 Assignment 4: 2.1-2.2

3. Analyze the following excerpts using Roman numerals and figured bass. Add chromatic alterations to the figured bass as needed. Excerpts contain both secondary dominants (V/x) and secondary leading tone chords (vii°/x). Some of the chords in the first example are incomplete.

(41)

Excerpt C: A piano piece in C major, 4/4 time. The right hand features a series of chords and arpeggios, while the left hand plays a steady eighth-note bass line. The excerpt consists of five measures.

C:

Excerpt D: A piano piece in D major, 4/4 time. The right hand features a series of chords and arpeggios, while the left hand plays a steady eighth-note bass line. The excerpt consists of five measures.

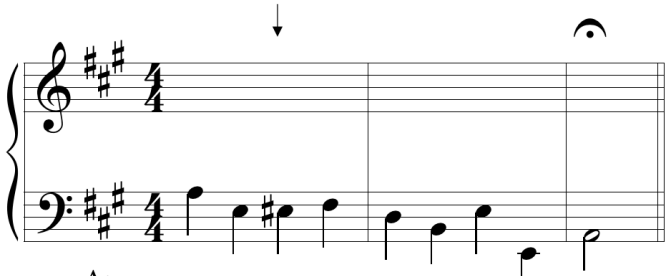
D:

1. List the closely related keys to the following:

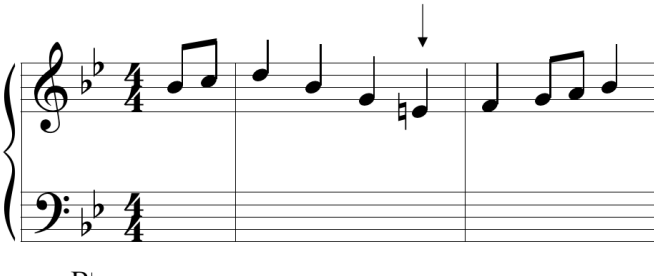
Key	Closely related major	Closely related minor
G Major		
D Minor		
E \flat Major		
A Minor		
B \flat Major		
F Minor		

2. Define tonicization:


3. Compose tonicizations for each of the following using secondary dominants, or secondary leading tone chords (arrows indicate secondary chord bass or soprano). Analyze your solution using Roman numerals and figured bass.



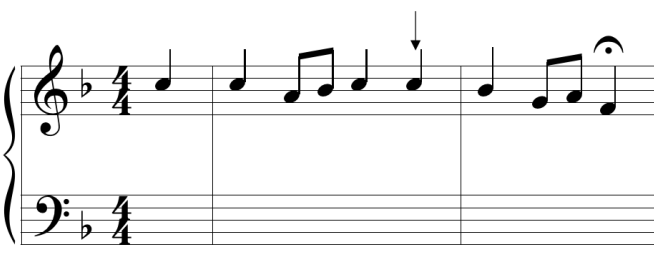
A:



B \flat :



E \flat :



F:

4. Define modulation:

5. Part-write B, T, and A below the given soprano. Analyze the result with Roman numerals and figured bass. Locate the common chord for the modulation and analyze the phrase in the new key.

The image shows a musical staff with a treble clef. The melody consists of the following notes: G4, A4, B4, C5 (marked PAC), D5, E5, F5, G5, A5, B5, C6 (marked PAC). The bass staff is empty.

C:

6. Analyze the chorale below using Roman numerals and figured bass. In phrases that modulate, locate the common chord and analyze the phrase in a new key. The initial key is D Major. Fill in the formal graph below the excerpt.

Bach: Valet will ich dir geben

The image shows two systems of musical notation for a chorale. The first system has a treble staff with a key signature of two sharps (D Major) and a 4/4 time signature. The melody starts with a half note D4, followed by quarter notes E4, F#4, G4, A4, B4, C5, and a half note D5. The bass staff has a key signature of two sharps and a 4/4 time signature. The melody starts with a half note D3, followed by quarter notes E3, F#3, G3, A3, B3, C4, and a half note D4. The second system continues the melody in the treble staff with a half note D5, followed by quarter notes C5, B4, A4, G4, F#4, E4, and a half note D4. The bass staff continues with a half note D3, followed by quarter notes C3, B2, A2, G2, F#2, E2, and a half note D3.

Phrase	Phrase 1	Phrase 2	Phrase 3	Phrase 4	Phrase 5	Phrase 6
Cadence						
Key						
Context						
m. #'s						
Phrase analysis (e.g. T-d-T).						

112 Assignment 6: 2.3-2.4

1. Analyze the following with Roman numerals and figured bass. Indicate a modulation in the last example.

Beethoven: Op. 2, no. 1

Measures 67-70 of Beethoven's Op. 2, no. 1. The key signature is three flats (B-flat, E-flat, A-flat). The melody in the right hand starts on a half note G4, followed by quarter notes A4, B-flat4, and A4. The bass line in the left hand consists of quarter notes G3, F3, E3, and D3. The final measure (70) features a half note G4 in the right hand and a half note D3 in the left hand.

Cm:

Beethoven: Op. 13, Piano Sonata, mvt. III

Measures 1-5 of Beethoven's Op. 13, Piano Sonata, mvt. III. The key signature is three flats (B-flat, E-flat, A-flat). The melody in the right hand starts on a half note G4, followed by quarter notes A4, B-flat4, and A4. The bass line in the left hand consists of quarter notes G3, F3, E3, and D3. The final measure (5) features a half note G4 in the right hand and a half note D3 in the left hand.

Cm:

Beethoven: Op. 13, Piano Sonata, mvt. III

Measures 73-77 of Beethoven's Op. 13, Piano Sonata, mvt. III. The key signature is three flats (B-flat, E-flat, A-flat). The melody in the right hand starts on a half note G4, followed by quarter notes A4, B-flat4, and A4. The bass line in the left hand consists of quarter notes G3, F3, E3, and D3. The final measure (77) features a half note G4 in the right hand and a half note D3 in the left hand.

Cm:

Clementi: Op. 36, No. 2

Measures 1-8 of Clementi's Op. 36, No. 2. The key signature is one sharp (F#) and the time signature is 2/4. The melody in the right hand starts on a half note G4, followed by quarter notes A4, B4, and A4. The bass line in the left hand consists of quarter notes G3, F3, E3, and D3. The final measure (8) features a half note G4 in the right hand and a half note D3 in the left hand.

G:

112 Assignment 6: 2.3-2.4

2. Analyze harmony, cadences, and non-chord tones. Complete a formal graph noting key relationships, proportions and large-scale function of phrases.

A:

Phrase	Phrase 1	Phrase 2	Phrase 3	Phrase 4	Phrase 5	Phrase 6
Cadence						
Key						
Context						
Length						
Phrase Analysis: (e.g. T-D-T)						

Music 112

Unit Three:

3.1 Melodic Phenomena

3.2 Melodic Motives and Transformations

3.3 Phrases and Phrase Periods

3.4 Binary Form

Unit Three Assignments

3.1

Melodic Phenomena: General features of melodies.

- **Agogic Accent:** pitches accented by longer duration, or frequent repetition. These pitches often occur at cadences, are tendency tones, or emphasize tones of the melodic structure.
- **Cadence Formulas:** are melodic patterns that terminate phrases. Some, like the PAC, specify melodic and harmonic pitches.
- **Melodic Patterns:** patterns of similar intervals and rhythms transposed to various pitches of the scale. These may be used in sequences, or repeated to form connections between phrases.
- **Motives:** short, recurring pitch and rhythm patterns that are integral to thematic statements, and are developed/transformed in a musical work.
- **Contour:** pitches may ascend, descend, occur in arch, inverted arch contour; or in combinations thereof.
- **Tonic/Dominant pitches:** pitches of the tonic and dominant are used to establish the key of a work. They often occur at cadences, or in patterns that unfold intervals or triads.

Phrase Analysis:

Haydn: String Quartet, Hob III/74, mvt. II

Largo assai
violin I

Agogic accent	Scale degrees: E: 3-4-3-6; 5-1-3-5-2-6-(5). Agogically accented pitches move to and from tonic or dominant pitches. The second phrase features B ⁴ -B ⁵ -B ⁴ .
Cadences	HC on beat three of the measure before the repeat. Cadence occurs on weak beat. Scale degree 5 is embellished by agogically accented 6. Faster rhythms appear near the cadence.
Melodic Patterns	mm. 1-4; 5-8 each contain distinct patterns. Third outlines mm. 1, 3: 3-2-1. Tendency tones resolve (mm. 2-3; 4-5). Arpeggiation mm. 5-8. Step progression is created by the thirds in m. 9 (1-3; 7-2; 6-1; #4-6; 5).
Motives	mm. 1, 3; 5-8
Contour	Arch: G ^{#4} -B ⁴ -E ⁵ -B ⁵ -B ⁴ (mm. 1-4; 5-8; 8-10).

3.1

Mozart: Clarinet Concerto, K. 622, mvt. I



Agogic accent	Scale degrees A: 5, 3, 1; 1, 4, 1. Accented tonic scale degree leads to each HC.
Cadences	HC mm. 4, 8. Closing figure (m. 7) creates step progression to: A: 5-4-3-2-1-7.
Patterns	mm. 5 and 6 are similar in content. Conjunct motion with frequent chordal skips. Step progressions are created in each phrase (Phrase 1: 5-3-2-1-7; Phr. 2: 1, 4-3, 5-4-3-2-1-7).
Motives	Elements in mm. 1, 5, 6 are transposed to various keys through out the movement.
Contour	mm. 1-4 descending, E ⁵ -C ^{#5} -B ⁴ -A ⁴ -G ^{#4} mm. 5-8 arch contour A ⁴ -A ⁵ -G ^{#4} .

Brahms: Violin Sonata nr. 3



Agogic accent	Pitches of the tonic and dominant: Dm: 5-1-5-5; 3-5-2-2-7-(3-2-1).
Cadences	AC implied by 3-2-1 in last measure.
Patterns	mm. 1-4 are rhythmically similar to mm. 5-8. Leaps to chord members followed by steps.
Motives	mm. 2, 3 figures are repeated in mm. 4, 6-8.
Contour	mm. 1-4; 5-8 arch/ wavelike contour

Mozart: Piano Sonata, K. 284, mvt. III



Agogic accent	Scale degrees 1, 2, 3, 4, 5, 6 accented through duration or repetition.
Cadences	HC in m. 4 on beat two.
Patterns	Scalar figures, and Chordal skips used in sequence (m. 3). Chordal skips in mm. 1, 2, 3. Ascending and descending scales (tetrachords).
Motives	Pick up to m. 1 is an important motive throughout the set of variations. Chordal skips (mm. 2, 3) are important in the Thema.
Contour	Arching contours: A ⁴ -D ⁵ -G ⁵ -A ⁴ ; D ⁵ -G ⁵ -A ⁵ -B ⁵ -E ⁵

The identification of melodic phenomena provides a foundation for melodic analysis.

3.1

Sequences:

Sequences are created when motives or melodic patterns are repeated using a consistent intervallic pattern. In this example the motive's contour is inverted in m. 12 (bass clef), and this form is sequenced generating a 4-3-2-1 step progression in mm. 13-16.

Bach: Minuet

motive

sequence

PAC

motive contour inverted

In the example from Beethoven below a melodic sequence connects chord tones Ab: 1-2-3-#4-5. Sequences often create step progressions, chordal skips, or arpeggiations.

Beethoven: Op. 2, no. 1

In this example from Bach, the motive 1-2-3-2-1, and its inversion 3-2-1-2-3 are sequenced using a circle of fifths chord progression. Alternating figures form a step progression on each stave. Note the pattern changes once the dominant is reached. The octave leap in the bass prepares the tonic in the measure that follows.

Bach: Invention #14

step sequence

inverted motive

motive

step sequence

Bb: I IV vii° iii vi ii V

Scale Figures, Arpeggios:

Scale figures and arpeggios appear often in melodies to connect chord members, or individual pitches. In the Bach: Minuet below, a scale is used to connect root and fifth of the tonic and subdominant chords. In this work, the scale figure is an important motive.

3.1

Bach: Minuet

Scale connects root-fifth:

In the excerpt from Haydn below, the initial motive, “m” outlining a third, appears varied as a scale, and as an arpeggio. Similar rhythm and metric placement of the motive make it easier to hear the transformations as related. A scale at the end of the passage is used to bring the phrase to a close and connect members of a G and C chord creating a transfer of B^5-B^4 .

Menuetto

Closing Figure

PAC

C:

G: IV

In Clementi: Op. 36, no. 2 scale figures in the second theme, connect chord members (mm. 16-17: A^5-D^5 ; $B^4-D^5-B^4$) and in m. 19 transition to the closing theme, a scale connects $C\#^6-C\#^5$. Last the arpeggio in m. 18 connects D^3-D^6 .

(16)

Closing Theme

L.T. Scale connects $C\#^5-C\#^4$

Arpeggio connects $D^3-D^4-D^5-D^6$

3.2

Melodic Motives:

A motive is a short musical idea incorporating pitches, and rhythms in a form that is easily recognized and transformed. To be identified as such, a motive must occur two or more times during the course of a work. We will examine melodic, rhythmic, and implied harmonic characteristics of motives from several works.

Motive structure:

Examine the structure of the following motive from Bach's two-part Invention #1:

Melodic:	The motive ascends from tonic to the subdominant (C ⁴ -F ⁴) of the scale, and descends using two consonant skips sequenced by step.
Rhythmic:	The motive begins on a weak beat and is two beats in length. All rhythms are sixteenths.
Implied Harmony:	The motive outlines the third of the tonic chord, followed by two descending thirds implying overall T-D-T, or T-Pd-T.

Bach Invention #1, Motive:

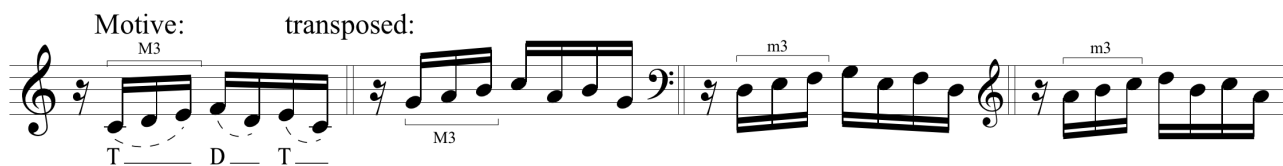


Basic Transformations:

Understanding basic motivic transformations can aid musical analysis and deepen our understanding of a motive's musical potential.

Transposition:

Mapping tones of a motive onto different scale degrees. Transposition of Bach's motive to different scale degrees generates third outlines that are either major or minor.



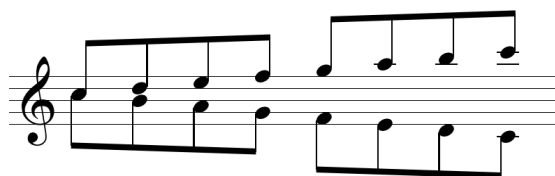
Retrograde:

The melodic pattern of a motive played in reverse. Invention I does not use the retrograde.



Inversion:

Mapping tones around an inversional axis. The example shows inversions around C, tonic of the C Major scale. Invert by choosing a pitch's pair: e.g. C-D-E, inverts onto C-B-A. Inversions may also be transposed.



Invention I, uses motivic inversion.



Retrograde Inversion:

The inversion played in reverse. Invention I does not use the retrograde inversion.



Fragmentation:

A fragment is a recognizable portion of a motive, and fragmentation is a commonly used technique. The first segment below (a.) is augmented and sequenced in mm. 3-4, mm. 11-12, and inverted in mm. 19-20. The second (b.) is inverted, and sequenced. It precedes closing figures in the key of the dominant (mm. 5-6) and the submediant (mm. 13-14).



Rhythmic Augmentation/Diminution:

Augmentation and diminution may be applied to motivic elements to generate new material. The most common form of augmentation or diminution employs a 2:1 ratio (a doubling or halving of rhythms). Invention I employs augmentation of the first part of its motive (a.).



Bach Invention I, a Study in Motives:

Examining transformations, as was done above, demonstrates a motive's potential, and speeds our recognition of elements when analyzing a work. Examples below demonstrate how motives are used in Bach's Invention I.

In mm. 3-5 the inversion of the motive sequenced from A⁵-A⁴. This is accompanied by augmented fragment (a.). Notice the inverted motive is sequenced four times against the three statements of a.

3.2

In the Inventions, sequences are used to modulate to closely related keys. Below the inverted motive (Rh) and augmented fragment (Lh) are sequenced three times. Analyze the harmony, can you tell where the modulation begins?

In mm. 5-7 the motive, its inversion, and fragments a., b. are used to conclude the modulation to the dominant. Note the cadence is signaled by: ornaments, an octave leap in the bass, and the absence of motivic material.

In mm. 15-18 the motive is alternated and sequenced with its inversion generating: C: vi-V⁶/ii-ii-IV⁶-vii⁰-I. Bb³ in m. 18 is the start of a motion towards IV (m. 20) that prepares the way for the final cadence in m. 22.

Motivic analysis traces motivic transformations/variations and how they generate musical structures (e.g. motive entries, imitation, sequences etc.), and the tonal plan (sequence of keys).

Bach's Inventions employ motives in great number and variety because the Invention form is entirely based on its motives. In contrast, other works may contain fewer motives, and further, the use of motives may be influenced by other factors such as musical style, or formal type (e.g. Sonata, Rondo, etc.). Melodic motives are common in all historical style periods, and study of their form and use reveals much about musical structure.

3.2

Bach: Invention I

This image displays the first 20 measures of J.S. Bach's Invention No. 1 in G major, BWV 999. The score is written for a single melodic line on a grand staff (treble and bass clefs). The key signature has one sharp (F#), and the time signature is 4/4. The piece begins with a treble clef and a key signature of one sharp. The notation includes various musical symbols such as eighth and sixteenth notes, rests, and accidentals. Measure numbers 4, 7, 10, 13, 16, and 19 are indicated at the start of their respective systems. The piece concludes with a double bar line and a final chord in the bass clef.

3.2

Clementi Op. 36, no. 2, Sonatina:

The following work employs motives as integral parts of its main theme. These are vehicles for the creation of contrasting themes, or other elements (e.g. development, transition). A Sonatina, a small Sonata, uses motivic material within the framework of a musical form.

The first phrase contains three motives (a, b, c):

Melodic:	a. Arpeggiates a chord with each chord member repeated.	b. Descending motive.	c. Double neighbor figure.
Rhythmic:	a. Begins on the + of beat two; 1.5-2 measures long. Rhythms are eighths, ends with dotted-quarter.	b. Begins on the + of beat two; 1-1.5 beats long. All rhythms are sixteenths in the second theme.	c. Mostly on beat two; 1 beat in length. All rhythms are sixteenths.
Implied Harmony:	a. Outlines a tonic or other chord	b. No harmony implied.	c. R, alt; R, alt, R outline a third.
Formal Role	a. Main melodic motive. Used to recall the primary theme. Appears at the beginning of each major section of the work (Exposition, Development, Recapitulation)	b. The first part of the second theme. Used in the second half of the Exposition and Recapitulation.	c. Most widely varied. Appears in both themes and is primary element in the Development section.
Usage:	m. 1, 5, 23, 24, 37, 41	m. 2, 6, 8, 10, 14, 16, 24, 29, 38, 42, 44, 46, 50, 52	(see below)

The c. motive is transformed/ varied more than a, or b. The table shows motives and usage in the work:

c.	m. 4, 26, 27, 28, 31-35, 39
c. RI	m. 7, 16, 25, 43, 52
c. Ralt a primary element of the second theme.	m. 9, 11, 15, 17, 45, 47, 51, 53
c. Ralt, R Retrograde of c. Ralt . Could also be labeled c. alt	m. 30

Motivic analysis identifies the role of motives, illuminates relationships between phrases, and reveals which material is derived from old, and which is new.

Motives serve several roles in this work: to signal the main theme, generate the second theme, and/or transitions. Further, some are varied (c.) while others remain stay largely same (a.). The closing theme is not derived from the main theme; its purpose is to bring an end to the exposition.

Exposition:

Main Theme

Second Theme

Closing Theme

L.T.

Development:

Main Theme Fragment (Am)

Recapitulation:
Main Theme Return

34 c. c. a. b. c. *fz*

40 a. b. c. RI b. C. R, alt *fz* *p*

46 b. C. R, alt b. *f*

51 C. R, alt C. RI b. C. R, alt

56 Closing Theme

For each of the following:

- Identify and label melodic motives.
- Determine melodic, rhythmic, and implied harmony.
- Identify transformations (e.g. retrograde, inversion etc.).
- Discuss how motives relate to phrases.
- Report on your findings in oral, or written form.

3.2

Bach: Minuet

First system (measures 1-8): Treble clef, key of G major (one sharp), 3/4 time. The melody features eighth-note runs and dotted rhythms. The bass line consists of half notes and quarter notes.

Second system (measures 9-16): Continuation of the melody and bass line. Measure 16 ends with a repeat sign.

Third system (measures 17-24): Measure 17 begins with a repeat sign. The melody continues with eighth-note patterns. The bass line has some rests.

Fourth system (measures 25-32): The final system, ending with a double bar line. The melody concludes with a half note and a quarter rest.

Haydn: Hob. XVI:3, mvt. III

First system (measures 1-8): Treble clef, key of G major (one sharp), 3/4 time. The melody is marked 'Menuetto' and includes trills (tr) and triplets (3). The bass line has rests in the first two measures.

Second system (measures 9-16): Continuation of the melody and bass line. Measure 16 ends with a repeat sign.

Third system (measures 17-24): Continuation of the melody and bass line. Measure 24 ends with a repeat sign.

Fourth system (measures 25-32): The final system, ending with a double bar line. The melody concludes with a half note and a quarter rest.

3.3

The Phrase:

Phrases contain motives, phrase members, and cadences. They may include embellishments, or melodic cadence figures, and may also be tonally closed (e.g. AC), or tonally open (e.g. HC). Phrases are commonly grouped into two, three, and four phrase periods.

Phrase Member:

A portion of a phrase containing a motive, or melodic pattern. Ends with a weak or non-existent cadence.

Czerny: Op. 453, no. 8

Each phrase is divided into four two-measure members. Examine how these are supported harmonically. There are four melodic ideas stated over the course of the period (motives a-c, closing figure).

- a—a tonic arpeggio (1-3-1-5).
- a' variation using chord members (5-1-5-3).
- b—a quarter note and four eighth figure that steps down, on accented beats, E⁵-D⁵-C⁵.
- b'—rhythmically similar to b, but steps upward. Eighth note figure is inverted, E⁵-D⁵-C⁵ on accented beats (mm. 5-7).
- c—an arpeggio, rhythm: two eighths, two quarters; steps downward E⁵-D⁵.

Czerny: Op. 453, no. 8

The musical score for Czerny: Op. 453, no. 8, is presented in two systems. The top system, labeled 'A', shows a phrase in 3/4 time with four two-measure members. Motives are labeled: 'a' (a tonic arpeggio), 'a'' (a variation using chord members), 'b' (a quarter note and four eighth figure that steps down), and 'Closing PAC'. The bottom system, labeled 'B_{contr}', shows a contrasting phrase with four two-measure members. Motives are labeled: 'b'' (rhythmically similar to b, but steps upward), 'c' (an arpeggio), and 'Closing arpeggio PAC'. Harmonic progressions are indicated below the staves: for system A, C: I, V⁴, 7, I; for system B_{contr}, V⁶, I, V⁴, 7, I.

In the preceding example PAC's conclude each phrase, and harmonies of each phrase are similar. Rhythms are also similar, but in a different order. Because of the difference, this period is contrasting (A; B_{contr}).

Two-Phrase Periods (repetition, varied repetition, similar, contrasting, modulating):

Periods are groups of two or more phrases linked by musical material, and cadences.

Periods of two phrases are very common.

Repeated Phrase:

In repeated phrase periods both phrases are identical. This type is often employed in folk tunes. Both phrases are labeled A. The first A signifies the first phrase; the second indicates repetition. The term parallel indicates that phrases that are the same, or very similar.



Varied Repetition:

In the following, the first phrase ends with a HC and the second with a PAC. The period uses varied repetition, meaning the pitch structure is nearly identical between phrases; they are labeled A, and A'.

Phrase periods whose melodic content is A; A, or A; A' are called parallel. Further, because the PAC complements the HC, the periods using this structure are said to be Antecedent-Consequent; or that one phrase completes the other. Some authors state that the Antecedent-Consequent structure is the foundation of a two-phrase period.

Schumann: Op. 68, no. 8, Wilder Reiter

The Bach: Minuet is another case of varied repetition (A; A'). Here variations occur between phrase members b-b' where the bass imitates the soprano, and between d-d', where the melody and bass differ between the HC, and PAC.

Bach: Minuet

The example from Mozart below also uses varied repetition. In addition, the internal structure of the phrase uses an a-a'-b; a-a'-c pattern where a-a' equals the length of b. This short-short-long structure is often called a sentence. Sentence structure is commonly used to organize phrase members.

Mozart: K. 331, mvt. I

Schubert: Impromptu, no. 2 uses a phrase period where the second phrase is similar to the first (similar rhythms, different pitches). The second system repeats the first phrase an octave higher, and ends with a PAC. Each period features an A; B_{sim.} structure, but overall both systems comprise two parallel periods (A, B_{sim.}; A', B'_{sim.}), or a double period. Note the cadences; all are IAC except the last, which is PAC. The most conclusive cadence, PAC here, determines whether the phrase period has 2, or 4 phrases. The PAC at the end of the two similar periods A, B_{sim.}; A', B'_{sim.} groups all four into a double period. Make a list of how the phrases B and B' differ.

Schubert: Impromptu no. 2

The musical score for Schubert's Impromptu no. 2 is presented in two systems. The first system contains measures 1 through 8, with labels 'A' above measure 1, 'IAC' above measure 5, 'Bsim' above measure 6, and 'IAC' above measure 8. The second system contains measures 9 through 16, with labels 'A'' above measure 9, 'IAC' above measure 12, 'B'sim' above measure 13, and 'PAC' above measure 16. The piece is in 3/4 time and B-flat major.

The example below contains two phrases each ending with a HC. The phrases bear little resemblance to each other (A; B_{contr.}). Both phrases end with half cadences implying continuation.

Mozart: Clarinet Concerto, K. 622, mvt. I

The musical score for Mozart's Clarinet Concerto, K. 622, mvt. I, shows two phrases. The first phrase, labeled 'A', begins with a piano (*p*) dynamic and ends with a half cadence (HC). The second phrase, labeled 'B_{contr.}', also ends with a half cadence (HC). The piece is in 4/4 time and D major.

The phrase from Beethoven below uses a sentence structure: a-a-b. In b, fragments of a are combined with new material that brings about the cadence. The HC cadence suggests continuation (tonally open). Here the HC prepares the modulation to Cm.

Beethoven: Op. 1, no. 2

The musical score for Beethoven's Op. 1, no. 2, illustrates a sentence structure 'a-a-b'. The first 'a' section (measures 1-4) is followed by a first ending 'a₁' (measures 5-6). The second 'a' section (measures 7-10) includes fragments of the first 'a' section, labeled 'a_{frag.}'. The final 'b' section (measures 11-14) also includes fragments of the first 'a' section, labeled 'a_{frag.}', and concludes with a half cadence (HC). The piece is in 6/8 time and B-flat major.

Modulating Phrases and Phrase Periods:

Modulating phrases end with a cadence in a new key. The Haydn Minuet below has two four-measure phrase members and ends in the key of the dominant (G). Haydn gives the cadence much fanfare with an elaborate closing figure and a cadential trill. Modulating phrases are tonally open.

Menuetto

Closing Figure

PAC

C:

G: IV

In Mozart's Theme and Variations K. 284, mvt. III, the first phrase modulates to the dominant (A). Notice the Bm common chord (pivot) used in the modulation. This triad is an oft-used common chord for modulations in Major keys, because it is Pd in both D (vi), and A (ii). The pivot is followed by a secondary chord, which prepares the closing figure in m. 7. Mozart uses figures like this often; see the Clarinet Concerto from earlier in this section, and in K. 333 later in the section. Analyze the harmony of this example.

Mozart: K. 284, Theme

A

HC

p

f

D:

(5) Bcontr.

Closing Figure

PAC

(D:)

vi 6

A: ii

In Clementi's Op. 36, no. 2 the first two phrases modulate to the key of the dominant. Notice the excerpt uses the same common chord as the previous example.

Clementi: Op. 36 no. 2

A

IAC

Bsim.

PAC

p

fz

p

fz

G:

vi 6

D: ii

Three-Phrase Periods:

In three and four phrase periods, the final cadence is the most conclusive. This period type affords a variety of possible structures; AAB (bar form) is found in much early music, and A-B-A' was a popular form for short instrumental works in the 19th century.

In the excerpt from Rossini below material from A is transposed in B_{sim.}, while C contrasts both A and B. The register transfer, G⁵-G⁴, and faster rhythms—closing figure—lead to the PAC. Cadences are: weak beat-HC (m. 4), IAC (m. 8), and strong beat-PAC (m. 12). Note that phrase A and B are an expansion of the tonic chord I (mm. 1-3)-V⁶ (mm. 4-7)-I (m. 8).

Rossini: Il Barbiere di Siviglia, Overture

The musical score for Rossini's *Il Barbiere di Siviglia*, Overture, illustrates a three-phrase period in 4/4 time.
 - **Phrase A (mm. 1-4):** Labeled 'A', it concludes with a weak beat Half Cadence (HC) on the fourth measure.
 - **Phrase B (mm. 5-8):** Labeled 'B_{sim.}', this phrase is a transposed version of A. It concludes with an Internal Authentic Cadence (IAC) on the eighth measure.
 - **Phrase C (mm. 9-12):** Labeled 'C', it features a 'Closing Figure' and ends with a strong beat Perfect Authentic Cadence (PAC) on the twelfth measure.
 The score is written for piano with treble and bass staves, showing various musical notations including slurs, ties, and dynamic markings.

Clementi's Op. 36, no. 3 opens with a three-phrase period (A-B_{contr.}-B'_{contr.}). Here the elaborate closing figure used in phrase two seems to imply that it will be the final phrase in the period. However, the use of dynamics, articulations, and weak beat cadences clarify that phrase two prepares phrase three. Phrase three brings the period to a close with a crescendo, secondary chords, and changes of register all of which give the phrase more weight at the PAC.

Clementi: Op. 36, no. 3 (mm. 1-12)

The musical score for Clementi's Op. 36, no. 3, illustrates a three-phrase period in common time.
 - **Phrase A (mm. 1-4):** Labeled 'A', it begins with a forte (*f*) dynamic.
 - **Phrase B (mm. 5-8):** This phrase includes a 'Plagal' cadence.
 - **Phrase C (mm. 9-12):** This phrase includes a 'sim.' marking and concludes with a strong beat Perfect Authentic Cadence (PAC).
 The score is written for piano with treble and bass staves, featuring various musical notations such as slurs, ties, and dynamic markings.

B contr. Closing Figure IAC

B' contr. PAC

Schumann uses an A-B-A' phrase structure for Op. 68, no. 1. Phrase A ends with a tonicized HC; B moves back to the tonic ending with a HC; and A' is consequent to A, ending with a PAC in the tonic key.

Melodic material from mm. 1-2 is used throughout the piece. In B, m.1 is transposed and sequenced moving towards the phrase's apex (D^5 - F^5 - A^5). In B and A' m. 2 is used to bring about cadences in mm. 8, 12. Members of both A phrases are 2+2, while B uses a sentence structure of 1+1+2.

Schumann: Op. 68, no. 1, Melodie

A HC

B contr. <> HC

A' PAC

Double Period:

A double period is a period formed of two, two-phrase periods. The simplest form of the double period is the repetition of a two-phrase period, but in many cases a double period will feature four cadences; the final cadence being the most conclusive.

In a double period, the cadence structure of each two-phrase period is often HC, PAC, which is the case in the example below. If we examine the cadences, we see that HC are identical and both occur on beat three. Authentic cadences occur on beat one and though both are PAC, but the second is more conclusive. In the first (m. 8) the tonic chord is expressed by a tripled root and is followed immediately by an ascending scale connecting F^4 - F^5 and the beginning of A'' . The final cadence in m. 16 features full triads, a cadential bass pattern, and an octave leap at the cadence. Further, the cadence is preceded by a closing figure using triplets. These factors give much weight to the second PAC thus emphasizing the double period structure.

Discuss further variations of motives a-d, embellishments, changes in harmonization, and other factors.

Mozart: K. 333, mvt. III

The musical score for Mozart's K. 333, mvt. III, illustrates a double period structure. The score is in 4/4 time and B-flat major. It consists of three systems of staves. The first system (measures 1-5) shows motives a, b, c, d, and A'. The second system (measures 6-11) shows motives b, a closing figure, a PAC, A'', b', and c. The third system (measures 12-16) shows motives d, A''', b', a closing figure, and a PAC. Annotations include 'scale connects F^4 - F^5 ' and 'Closing Figure'.

The following excerpt from Mendelssohn is a modulating double period. The opening period, A; B_{sim} , is mirrored by the second which features varied repetition of A; A' , and transposition of B; $C_{sim. B}$. Within each phrase, phrase members of mm. 2-3 are transposed and varied (a, b; a' , b').

Schubert: Symphony no. IV, mvt. I

Allegro

vn. I

strings

Cm:

32

afrag.

Closing Figure

afrag.

Closing Figure

PAC

(Cm:)

Cadential Extension

In the following three-phrase period, the first two contrasting phrases end on HC's while the last ends on a PAC. The final cadence is repeated making the period asymmetrical. This phrase also ends with a cadential extension.

Mozart: Die Zufriedenheit, K. 349

A

HC

Bcontr.

HC

C

PAC

PAC

cadential extension

The following phrase is a transition that connects Cm (v/Fm) to Eb (V/Ab); the transition ends on a HC in Ab, and m. 20 begins a new section.

The structure of the phrase may be divided into two and four-measure segments: 2+4+2+2+2. Here the IAC reached in m. 15 is repeated three times; and the cadential extension is embellished each time through the addition of voices to the texture.

Beethoven: Op. 1, no. 2

8 *p* a 3 iv
Fm: v A♭: ii

15 c IAC cadential extension IAC cadential extension IAC
A♭: V⁶/V V

Terms and Labels:

- **Repetition:** both phrases are identical; label: A; A.
- **Varied Repetition:** both phrases have nearly identical pitch structure; embellishments may be added, and cadences typically differ; label: A; A'.
- **Parallel:** repeated, and varied phrases (A', or B_{sim}) are parallel.
- **Similar:** when the second phrase of a period contains elements of the first (e.g. same rhythms), but is different in some way (e.g. different pitches); label: A; B_{sim}.
- **Contrasting:** the melodic material of one phrase bears little or no resemblance to the other; label: A; B_{contr}.
- **Sentence:** a phrase structure using an a-a-b form where the duration of both a's equals b.
- **Symmetrical:** phrases in period are the same length.
- **Asymmetrical:** phrases in a period are not the same length.
- **Modulating Phrase:** a phrase that ends in a key other than the one in which it started. Modulating phrases are integral to the unfolding of a work's tonal plan (sequence of keys).
- **Cadential Extension:** the repetition, or extension of a cadential figure.
- **Tonally Closed:** a phrase that begins and ends in the same key.
- **Tonally Open:** a phrase that ends in a key other than the one it started. Implies continuation.

3.4

Form:

Throughout history musical forms have been developed to accompany text, dance, or serve other functions (e.g. Prelude, Etude, Sonata etc.). As with phrases, forms unfold using repetition, varied repetition, or contrast; and phrases, and phrase periods are assembled into sections that become the form of a work. We will examine form using the outline below.

Motive	Phrase member, Phrase	Phrase Period	Section
Transformation: <ul style="list-style-type: none"> • Transposition • Inversion (diatonic/mirror) • Retrograde • Retrograde inversion 	Cadence (conclusive, inconclusive) key harmony extension (internal/ cadential)	Repeated / Variation Parallel Similar / Contrasting Antecedent / Consequent Three phrase Double period Modulating Symmetrical / Asymmetrical	Symmetrical / Asymmetrical Tonal Plan (keys) Functions Employed: <ul style="list-style-type: none"> • Expository • Transitional • Development • Termitive
Analysis			
Identify the basic elements of the work. How are these employed and what form do they take?	Phrase members; phrases (cadence). Type and conclusiveness of cadences generate periods. Tonal plan emerges from cadences in other keys (e.g. closely related). Take into account embellishment, register and texture (#of voices, activity).		Phrases and periods become sections. The tonal plan, phrase function (e.g. expository), and notational elements (e.g. repeat signs, da capo, dal segno) also contribute substantively.

Formal Graph:

A formal graph shows phrase relationships, cadences, keys, and structural functions. It gives an overview of a work's features, and shows how individual elements contribute to the form. Each work is unique however, and the formal graph may be edited as needed to suit the work at hand.

Form (sections A, B etc.)	First section		Second section	
Type (simple, balanced)				
Phrase	Phrase 1	Phrase 2	Phrase 3	Phrase 4
Cadence				
Key (tonal plan?)				
Period, Sym/asym etc.				

One Part Form:

A work that is complete in a single phrase is considered a one-part form. Phrases from Gregorian Chant are often of this type. One part forms are typically tonally closed.

Responsorial Psalm (for the Sunday after Pentecost)



We distinguish phrase members from phrases by the presence or absence of cadences. A work employing weak, elided, or non-existent cadences with little variation of texture may also be considered a one-part form.

Bach's Canon a. 2 from the Musical Offering (BWV 1079) is a crab or cancrizan canon where the second (lower) voice is a retrograde of the first. The work has no strong internal cadences and the voice interchange at m. 10 is one of few elements segmenting the work.

Bach: Musical Offering, Canon a. 2 *cancrizans*, BWV 1079

In Prelude 6 from the first book of Bach's Well Tempered Clavier authentic cadences are elided and the texture of the work remains constant except for imitation at m. 15, and changes of texture at m. 20, 21, 25, 26 (not shown). In the excerpt below the bass voice plays an important role in shaping motions from one key to the next. Brackets and dotted slurs show harmonies.

Bach: Well Tempered Clavier, Book One, Prelude 6 in Dm (BWV 846)

The image displays four staves of musical notation, each representing a different harmonic and melodic pattern in G major. The notation includes treble and bass clefs, a key signature of one sharp (F#), and various musical symbols such as triplets, slurs, and accidentals. The first staff shows a sequence of triplets in the treble and a single note in the bass. The second staff shows a sequence of triplets in the treble and a single note in the bass, with a 'PAC' label above the treble staff. The third staff shows a sequence of triplets in the treble and a single note in the bass, with a 'PAC' label above the treble staff and 'F: V I' below the bass staff. The fourth staff shows a sequence of triplets in the treble and a single note in the bass, with a 'PAC' label above the treble staff and 'Gm: V # i' below the bass staff. The fifth staff shows a sequence of triplets in the treble and a single note in the bass, with a 'PAC' label above the treble staff and 'Am: V # i' below the bass staff.

Binary Form (AB):

Binary forms are in two parts with conclusive cadences terminating sections, which are often repeated. Melodic material may be motivically based, or feature well delineated phrase periods. The second section (B) of a binary form will often reiterate or develop motives from the first (A). The graph below summarizes possible tonal plans for binary form.

There are three types:

- Simple Binary: a work in two sections with no repeat of material from A at the end of B. A two-phrase period is considered binary when the phrase period constitutes the entire work.
- Balanced Binary: a work in two sections with a brief reprise of material from A used at the close of B in the original key. A two-phrase period is considered binary when the phrase period constitutes the entire work.
- Rounded Binary: a work in two sections with a full or partial reprise of A in the original key at the end of B. Works using rounded binary will typically employ phrase periods in all formal sections.

3.4

Binary Form Tonal Plans:

a Section: A Cadence: Half or Authentic Tonality: I ————— I i i	B Authentic I ————— i
b Section: A Cadence: Authentic Tonality: I ————— V i v or III	B Authentic V ————— I v (III) i
c Section: A Cadence: Authentic Tonality: I ————— V i v or III	B Authentic Various keys ————— I Various keys i

Simple Binary:

The first Bourrée from Bach's third cello suite uses simple binary form. The work is structured around the opening motive, which is characteristic of the Bourrée—a work in duple meter beginning with a weak beat pickup. Notice the PAC's conclude each section of the work and that the tonal plan uses related keys: C-G | G-Am-C, tonal plan b from above.

Bach: Suite No. 3 in C for Violoncello, BWV 1009, Bourrée

Harmonic analysis of the Bourrée in C major, BWV 1009:

- Section A (Measures 1-16):** C: I — V — IAC (I) — PAC (V-I)
- Section B (Measures 17-32):** C: V⁶ — G: ii — vii^o — V⁷ — iii⁷ — iv — V[#] — PAC (V-I) — C: I — V/V — V

3.4

C: I⁶ ii V I⁴

C: I 6/4 V⁶/4 6/5 7 4/2 I⁶ V⁶/4 5/3 I

PAC

Form (sections A, B etc.)	A		B	
Simple Binary				
Phrase	A	B _{contr.}	C	D
Cadence	IAC	PAC	PAC	PAC
Key (tonal plan b)	C: I	C: V	C: V, vi	C: I
Period, Sym/asym etc.	Symmetrical contrasting period. Tonally open. Phrase A introduces main motive for the work and is T-D-T (expository) all other phrases include passage work introducing different harmonies. Main motive is rhythmic and metric; pitch and contour are influenced by key.		Asymmetrical similar period. D begins like C and both include dominant prolongations. Tonally closed with respect to the overall work. No repeat of any portion of A in the main key (C).	

The following the Double from Bach's Second Sonata for solo violin (BWV 1030) uses simple binary form. Melodically the work delineates two sections. Keys are Bm, A, Em, and Bm.

Bach: Sonata II in b minor, BWV 1030, Double

Bm: i

HC

1.

V

2.

B

Bm: V IAC

V

A: i⁶

A: ii

V⁶/VII

V⁵/VI

A: I

Em: vii^o4/3 i⁶ vii^o6 iv⁶ V⁶5 ii⁶ i⁶ vii^o6

IAC sequence

Em: i⁶ iv VII III

Form (sections A, B etc.)	A Section (8 measures)	B Section (24 measures) Asymmetrical binary form.		
Simple binary	HC	IAC (elided)	IAC (elided)	PAC
Key: (Tonal plan b)	Bm (i-V)	A V (F#)-ii-V-I	Em	Bm
Overview:	One phrase, 8 measures	4 measures. Chromatic common chord begins modulation to Em.	8 measures, last part of the section uses a harmonic sequence i-iv-VII-III.	12 measures. Chromatic common chord begins modulation to Bm. Two-measure figure sequenced (i-iv; ii°-V). Ends with cadential figure.

Balanced Binary:

When a portion of A is repeated in the original key at the end of the B section, a binary work is called balanced. There is no requirement as the length or form of the repeated material, it need only be in the original key and be recognizable as a portion of A—typically the main motive or the beginning of A.

In the Trio from Haydn Piano Sonata 15 the balanced binary form is constituted of a symmetrical phrase period. Phrase member labels indicate relationships between members; a_t acknowledges transposition, while a_{alt} acknowledges similar rhythms paired with different pitches. This work follows tonal plan c.

Haydn: Piano Sonata 15, Trio (Hob. XVI)

Form (sections A, B etc.)	A-Phrase 1		B _{contr.} -Phrase 2	
Balanced binary	A-Phrase 1		B _{contr.} -Phrase 2	
Relationship: (a, a', b _{sim} , b _{contr})	Phrase members are a, a', b _{sim} , c		Phrase members a _{alt1-2} unfold a sequence leading back to G. b _{sim} is repeated from A.	
Cadences	Weak IAC cadence part of T-D-T opening. Soprano 1-2-3.	Tonicized HC. Cadential bass and increase in the number of voices in the Soprano	Weak IAC concludes sequence that begins Phrase B.	PAC terminates phrase with closing figure (triplet), and cadential bass.
Key (tonal plan c)	G: I	G: V	G: ii	G: I
Period, Sym/asym etc.	Contrasting symmetrical phrase period. Each phrase is constituted of four members. Phrase member "a" occurs most frequently. Material from b _{sim} is the fragment from A that identifies this as balanced binary form.			

The Minuet from Bach's Sonata VI for solo violin (BWV 1016) is a balanced binary form where the first two measures of A are repeated after a harmonic sequence that modulates from the submediant back to the original key. The work's main motive (a) is quoted at the beginning of sections A, B and near the end. The work uses tonal plan b.

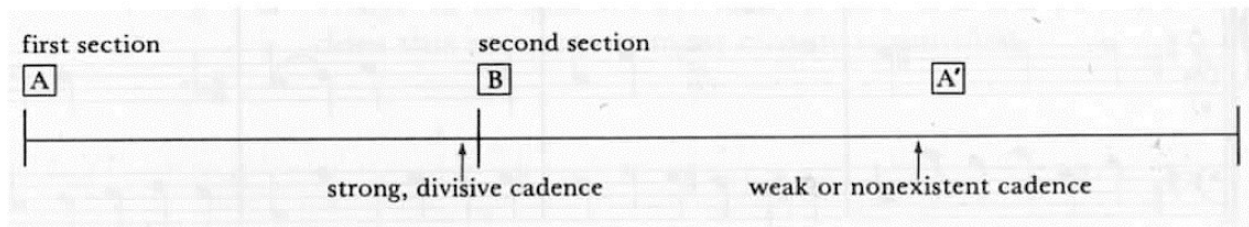
Bach: Sonata VI in E, BWV 1016, Minuet

3.4

Form (A, B etc.)	A (8 measures)		B (26 measures) The work is an asymmetrical balanced binary using tonal plan b.			
Phrase	A (4 m)	B (4 m)	C (4 m)	D (6 m)	E (8 m)	F (8 m)
Cadence	Weak IAC (m. 4)	HC	HC	PAC	IAC	PAC
Key (tonal plan b)	E: I	E: V	E: V	E: vi (C#m)	E: I	E: I
Overview:	The weak cadence in m. 4 divides this section in half.		Motive a opens the B section and is repeated three times ending in a weak HC.	This phrase features one occurrence of motive a. It ends with a PAC.	The work modulates back to the tonic using a harmonic sequence ending with an IAC. The sequence has a transitional function.	Measures 1-2 are repeated here making this a balanced binary. The sequence of the preceding phrase contrasts the use of mm. 1, 2 making their appearance a potent signifier of A.

Rounded Binary Form:

Rounded binary form features a full or partial restatement of A or A' at the conclusion of the second section. A weak or non-existent cadence typically precedes the restatement, A'. Key schemes follow those for Binary.



The work below from Czerny's 100 Progressive Studies is similar to the Trio from Haydn presented earlier. It features two symmetrical periods, similar and contrasting, respectively. The repeat of A is partial. Analyze the harmony of the last two measures of phrases A' and A'' to understand why the cadential harmony varies.

Czerny: from 100 Studies

Example 1. Musical score for two systems of piano accompaniment. System A (top) is in 4/4 time, featuring a melody in the right hand and a bass line in the left hand. The melody includes a first ending (A) and a second ending (A') leading to a repeat sign. System B (bottom) is also in 4/4 time, featuring a melody in the right hand and a bass line in the left hand. The melody includes a first ending (B) and a second ending (B') leading to a repeat sign.

Form (sections A, B etc.)	A		B	
Balanced binary				
Phrase	Phrase A	Phrase A'	Phrase B _{contr.}	Phrase A''
Cadence	IAC	PAC	Weak HC	PAC
Key (tonal plan b)	C	C	C: V	C
Period, Sym/asym etc.	Parallel, symmetrical period		Contrasting, symmetrical period	

Haydn Piano Sonata 15 is a rounded binary form where sections are symmetrical—both are fourteen measures long, and periods are asymmetrical—both are 6 m, and 8 m. The melody contains three motives; a, b are used as thematic elements while c (an arpeggiated figure) connects phrase members using a, or b in phrases B_{contr.} and C.

Haydn: Piano Sonata 15, Minuet (Hob. XVI)

Labels in the score: A, a, b, b (PAC), b, PAC, B_{contr.}, a', f, p, C: I, V, I, V⁷, I, V⁶, 8, b, c, b, c, PAC, C: vi, #4, I⁶, ii, V, #4, I⁶, ii⁶, I IV V, #, I, 15, B, C, a_{alt.}, c, a_{alt.}, c, A', A' a_{alt.} 2, HC, C: vii^o₄, I⁶, V⁷, I, ii⁶, V, 22, a_{alt.} 2, b, b (PAC), b, PAC, p, f.

Form (sections A, B etc.)	A		B	A'
Rounded binary (sym.)				
Phrase	A (6 m)	B _{contr.} (8 m)	C (6 m)	A' (8 m)
Cadence	PAC	PAC	HC	PAC
Key (tonal plan b)	C: I	C: V, G: I	C: V	C: I
Period, Sym/asym etc.	Contrasting, asymmetrical period. A contains a cadential extension near its end.		Contrasting, asymmetrical period (C, A').	A' contains a modification, and extension at its beginning (see A).

The third movement of Mozart's K. 284 is a set of theme and twelve variations each of which use rounded binary form. A' is partial restatement of A.

Mozart: K. 284, mvt. III, Theme

Chord and figured bass notation for the first system (measures 1-6):

D: V I vi ii⁶ V⁷ I ii⁶ V⁶⁻⁵ 4-3 I⁶ vi⁶ A: ii

Chord and figured bass notation for the second system (measures 7-12):

D: V/V⁷ #⁶ 5 V vi⁶ V/V⁶⁻⁵ 4-#3 V V⁷ I (IV? ii?) A: V I ii V I

Chord and figured bass notation for the third system (measures 13-18):

D: V I V vii⁶/V V V I vi ii⁶ V⁷ I ii⁶ V⁷ 4-3 I

Form (sections A, B etc.)	A		B	A'
Rounded binary				
Phrase	A	B _{contr.}	C	A'
Cadence	HC	PAC	HC	PAC
Key (tonal plan b)	D	A	D: V	D
Period, Sym/asym etc.	Parallel, symmetrical period.		Phrase is somewhat developmental. One measure of rest is inserted before A'.	A' is the opening phrase which is modified so that it ends with a PAC.

112 Assignment 7: 3.1

1. Complete the table for each of the musical examples. Label sequences on the example.

Beethoven: Op. 13, Piano Sonata, mvt. III

Cm:

Agogic accent	
Cadences	
Melodic Patterns	
Motives	
Melodic motion	
Contour	

Clementi: Op. 36, No. 2

G:

Agogic accent	
Cadences	
Melodic Patterns	
Motives	
Melodic motion	
Contour	

112 Assignment 7: 3.1

2. Label sequences in the following example:

3. Label melodic sequences in the following example. For scale figures, first identify chord tones at the beginning and end of each measure, then circle pitches that are connected by the scale.

Beethoven: Op. 2, no. 1

112 Assignment 8: 3.2


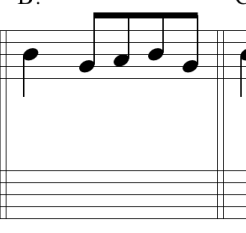


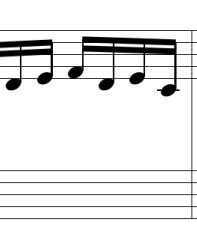
1. For each of the following:

- Identify and label melodic motives on the score.
- Determine melodic, rhythmic, and implied harmony of these four occurrences (mm. 6, 7, 18, 28).
- Identify transformations (e.g. retrograde, inversion etc.).

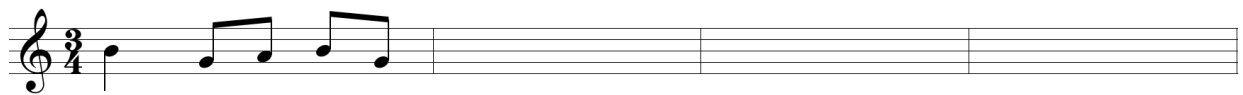
Bach: Minuet

Motive	m. 1	m. 6	m. 7	m. 18	m. 28
Melodic	G: 5 leaps to 1 and scale ascends G ⁴ -C ⁵ .				
Rhythmic	Quarter followed by four eighth notes.				
Harmonic	Outlines members of the tonic chord.				

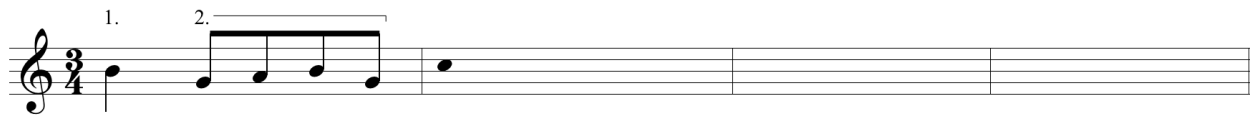
Follow the instructions for examples A-E.

A.	B.	C.	D.	E.
				
A. Retrograde Begin on C ⁵	B. Invert Begin on B ⁴	C. Transpose, Up a P4	D. Transpose, Up a M6	E. Retrograde Inversion, Begin on C ⁵

Transpose the given motive to create a descending sequence:



Invert the second part of the motive. Transpose the fragment to create a descending sequence.



(Short Answer) Discuss the role of the motive occurring on the pick-up beat. Though it appears in several forms during the course of the work, which factors enable us to hear variations of the motive as connected (e.g. pitches, contour, rhythms, metric placement)?

Haydn: Hob. XVI:3, mvt. III

Menuetto



112 Assignment 9: 3.3

1. For the following circle motives, phrase members label phrases and complete the tonal graph below:
Bach: Minuet

Phrase	Phrase 1	Phrase 2	Phrase 3	Phrase 4
Key(s)				
Cadence (measure #)				
Phrase members (measure #'s)				
Length				
Relationship: (A, A', B _{sim} , B _{contr})				
Period? Sym/asym? Cadential extension? Closing figure?				

2. For the following circle motives and complete the tonal graph below:

Haydn: Hob. XVI:3, mvt. III

Menuetto

Phrase	Phrase 1	Phrase 2	Phrase 3
Key(s)			
Cadence (measure #)			
Phrase members (measure #’s)			
Phrase Relationship: (A, A’, B _{sim} , B _{contr})			
Period? Sym/asym? Cadential extension? Closing figure?			

3. For the following circle motives and complete the tonal graph below:

Schubert: Symphony no. IV, mvt. I

Allegro

Cm:

32

(Cm:)

Phrase	Phrase 1	Phrase 2
Key(s)		
Cadence (measure #)		
Phrase members (measure #'s)		
Phrase Relationship: (A, A', B _{sim} , B _{contr})		
Period? Sym/asym? Cadential extension? Closing figure?		

4. For the following circle motives and complete the tonal graph below:

Rossini: Il Barbiere di Siviglia, Overture

The musical score is for the Overture of Rossini's *Il Barbiere di Siviglia*. It is in 4/4 time and the key of D major. The score is divided into three systems of four measures each. The first system (measures 1-4) shows the initial piano introduction. The second system (measures 5-8) continues the melody and bass line. The third system (measures 9-12) includes triplets in the melody and a more complex bass line with chords. The score is written for piano, with a treble and bass staff.

Phrase	Phrase 1	Phrase 2	Phrase 3
Key(s)			
Cadence (measure #)			
Phrase members (measure #'s)			
Phrase Relationship: (A, A', B _{sim} , B _{contr})			
Period? Sym/asym? Cadential extension? Closing figure?			

1. Complete the tonal graph below the score:

Bach: Sonata II in b minor, BWV 1030, Double

Form (sections A, B etc.) Type:		
Phrase relationship (m. #)		
Cadence (m. #, type)		
Key (tonal plan)		
Period, Sym/asym etc. Unique features		

2. Complete the tonal graph below the score:

Bach: Suite No. 3 in C for Violoncello, BWV 1009, Bourrée



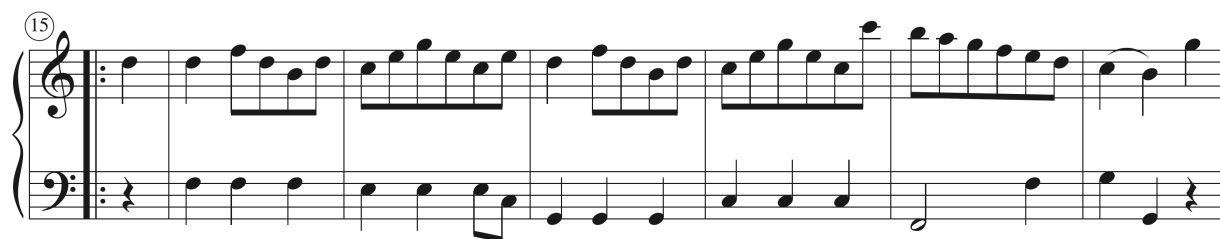
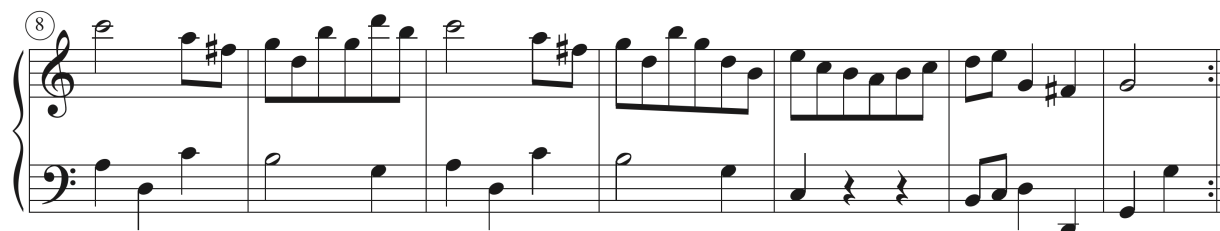
Form (sections A, B etc.) Type:		
Phrase relationship (m. #)		
Cadence (m. #, type)		
Key (tonal plan)		
Period, Sym/asym etc.		

3. Complete the tonal graph below the score:

Form (sections A, B etc.) Type:		
Phrase Relationship (m. #)		
Cadence (m. #, type)		
Key (tonal plan)		
Period, Sym/asym etc.		

4. Complete the tonal graph below the score:

Haydn: Piano Sonata 15, Minuet (Hob. XVI)



Form (sections A, B etc.) Type:		
Phrase Relationship (m. #)		
Cadence (m. #, type)		
Key (tonal plan)		
Period, Sym/asym etc.		