

10th Grade

Music – Choir I: Harmonic Function

May 11 – May 15

Time Allotment: 20 minutes per day

Student Name: _____

Teacher Name: _____

Academic Honesty

I certify that I completed this assignment independently in accordance with the GHNO Academy Honor Code.

Student signature:

I certify that my student completed this assignment independently in accordance with the GHNO Academy Honor Code.

Parent signature:

Packet Overview

Date	Objective(s)	Page Number
Monday, May 11	1. Review Roman numeral identification of chords 2. Introduce chord voicing (expanded form)	2
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Additional Notes: In order to complete the tasks within the following packet, it would be helpful for students to have a piece of manuscript paper to write out triads; I have included a blank sheet of manuscript paper to be printed off as needed, though in the event that this is not feasible students are free to use lined paper to hand draw a music staff.

I have also included answer keys to the exercises at the end of the packet. Parents, please facilitate the proper use of these answer documents (i.e. have students work through the exercises for each day before supplying the answers so that they can self-check for comprehension.)

As always, will be available to provide support via email, and I will be checking my inbox regularly. Please do not hesitate to reach out with questions or concerns during this time. For your reference my email is kevin.austin@greatheartsnorthernnoaks.org

I will also be holding guided instruction hours from now on via Zoom according to the following schedule:

2 nd Period	Monday, Wednesday; 11:00 – 11:50am
5 th Period	Tuesday, Thursday; 11:00 – 11:50am

These Zoom meetings are optional and will allow for much needed conversations to discuss theory problems and ask questions.

To join the Zoom Meeting:

<https://greathearts.zoom.us/j/93002027392?pwd=SWNMWkVQbXFUWlA6VXNLTUVBbW0rQT09>

Meeting ID: 930 0202 7392

Password: 223071

Monday, May 11

Music Theory Unit: Harmonic Function

Lesson 1: Review of Roman Numeral Identification/ Chord Voicing (Expanded Form)

Unit Overview: Harmonic Function

As we begin to approach tonal music from an analytical standpoint, we are moving ever closer to the act of composing itself. The compositional process, being a creative one, is not entirely understood. It is reasonable to assume that a composer thinks of several aspects more or less simultaneously – melody, harmony, rhythm, and so on. Naturally a complete analysis of a composition must take all these factors into account. For the most part however we've been concentrating on questions relating to the harmonic aspect of tonal music because it is this aspect that most clearly defines tonal music from other types. Our task now is to examine the behavior of chords as they move from one to the next; this will help us to define each chord's harmonic function.

Lesson 1 Socratic Guiding Questions: Keep these questions in mind as you study!

Do all chords have to be in “close” voicings? How might the displacement of notes in a chord across several octaves affect it? (Recall how inversions affected the chord)

Objective: Be able to do this by the end of this lesson.

1. Review Roman numeral identification of chords
2. Introduce chord voicing (expanded form)

Introduction to Lesson 1: Review of Roman Numerals

Last week we began to relate diatonic chords to the contextual parameters of a key signature. We saw that by comparing the root of a given chord to the *tonic* note (i.e. the first note of the scale) we could identify it within the key signature using a Roman numeral. The Roman numeral number identified the scale degree of the root note within the key, and the form of the numeral (e.g. uppercase or lowercase) determined the quality of the chord. Further, we saw that for diatonic chords there were certain expectations for the Roman numerals that arise in major and minor keys. Let's consider some of these expectations before we move on...

- 1) In Major keys, how many of the five common seventh chord types are diatonic to the key? How many are diatonic in minor keys?

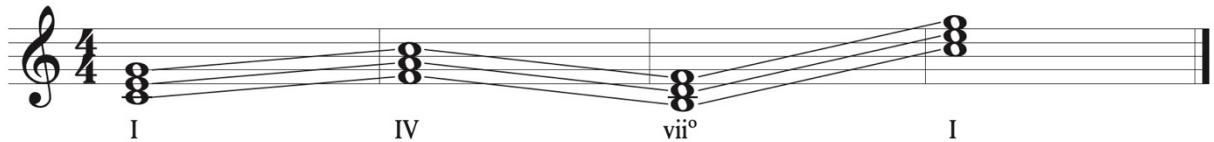
- 2) What is the quality of the chord built on scale degree 4 in a minor key? Does its quality change in major keys?

- 3) On which scale degree in the diatonic seventh chord the same in both major and minor keys?

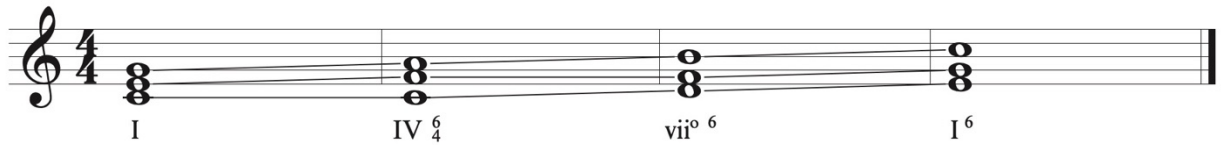
Chord Voicing: Expanded Form

We could say that the basic vocabulary of tonal harmony consists of triads and seventh chords and that its grammar involves the ways in which these chords are selected (which we call *harmonic progression*) and connected (which we call *voice leading*). Voice leading may be defined as the ways in which chords are produced by the motions of individual musical lines

It is important to understand that, as we have seen, not all chords are in root position – which, if it were the case, would lead to rather disjunct motion between chords. For example...

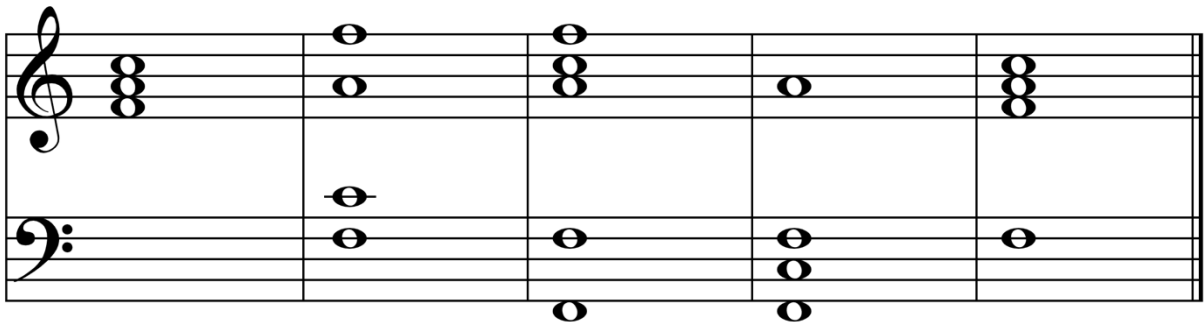


This progression in C Major is a functional progression (we will discuss why in the next couple days) but as we can see the individual musical lines are very disjunct – that is they leap up and down. This kind of “jagged” melodic movement is sometimes very taxing in our ears, and it becomes difficult to listen to or process over extended periods of time. We have already seen a solution to this problem in the way we invert chords. Inversion allows for smoother voice leading and greater prevalence of conjunct motion in individual musical lines. Here is the same progression with inversions added...



However, these examples are limited in that they are both in the treble clef and they both involve “close” voiced chords (e.g. “close” root position triad). But most music doesn’t look like this, and the voicing of chords changes based on the style and instrumentation of the piece. This leads us to the notion of a chord that does not exist in close voicing – what we call *Expanded Form*.

Let’s consider the following chord in C Major...



In the first measure we see a “close” root position F Major chord, which contains the notes F-A-C; we would say that this is the IV chord in the key of C Major. Compare this chord to the other chords that are notated. What do you see?

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All of the chords in the example above contain the same three notes: F-A-C. So, we would say that they are all IV chords in the key of C Major. As we can see though they are all voiced differently in that we have moved around the configuration of the notes within the chord. This we have seen before with inversion, though here we have forms that are quite different than what we have previously encountered. In order to address this, we are going to recall an aspect of inversion that we have already established: that is, that the part of the chord in the bass position determines the inversion of the chord. If we reexamine the chords above the bass note in all of them is F, so we would further say that they are all in root position.

Let's examine a different scenario...

The image shows a musical staff with two systems of staves. The top system has a treble clef and a bass clef. The bottom system has a bass clef. The music consists of five measures. In each measure, the bass clef has a single note (A, A, A, G, A) and the treble clef has a chord of three notes (F, C, A) in various voicings. The notes in the bass clef are: A (first space), A (first space), A (first space), G (second space), A (first space). The notes in the treble clef are: F (first space), C (second space), A (third space); F (first space), C (second space), A (third space); F (first space), C (second space), A (third space); G (second space), F (first space), C (second space); F (first space), C (second space), A (third space).

Here again we have F Major chords in various voicings all the way across, but now A is the lowest note in every chord. Because A is the 3rd of the chord and it is in the bass position, we would say that all these chords are in first inversion, regardless of their voicing.

Examining further...

The image shows a musical staff with two systems of staves. The top system has a treble clef and a bass clef. The bottom system has a bass clef. The music consists of five measures. In each measure, the bass clef has a single note (C, C, C, B, C) and the treble clef has a chord of three notes (F, A, C) in various voicings. The notes in the bass clef are: C (second space), C (second space), C (second space), B (second space), C (second space). The notes in the treble clef are: F (first space), A (second space), C (third space); F (first space), A (second space), C (third space); F (first space), A (second space), C (third space); B (second space), F (first space), A (second space); F (first space), A (second space), C (third space).

Our F Major chord is inverted further with the note C now appearing in the bass position of each chord. Accordingly, all of these chords are in second inversion.

As we encounter chords in expanded form it is important to remember that the voicing of a given chord (much like its inversion) does not affect its quality, but it will affect its function. In other words, each of the voicings of the F Major chord above will have a different tendency and will potentially want to resolve to different chords depending on its voicing. We will examine some of these habits in the next few days.

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Closing: Check your understanding of the lesson by labeling the following diatonic chords in expanded form with the appropriate Roman numeral in the major or minor key provided. Use inversion symbols where appropriate and remember that the note in the bass position will determine the inversion.

The image shows four measures of music on a grand staff (treble and bass clefs). The key signature is D major (two sharps). The chords are:

- Measure 1: D major triad (D, F#, A) in root position.
- Measure 2: D minor triad (D, F, A) in root position.
- Measure 3: F# minor triad (F#, A, C) in root position.
- Measure 4: Bb minor triad (Bb, D, F) in root position.

D:

d:

f#:

Bb:

Tuesday, May 12

Music Theory Unit: Harmonic Function

Lesson 2: Introduction to Harmonic Function and Chord Substitution.

Lesson 2 Socratic Guiding Questions: Keep these questions in mind as you study!

What determines the behavior of a chord? Are there some chords that might behave in similar ways?

Objective: Be able to do this by the end of this lesson.

1. Introduce harmonic function and chord substitution

Introduction to Lesson 2: Harmonic Function

As we begin to examine chord function it is important to clarify a few things. The idea of a chord's function is closely tied to notion of expectation – i.e. where do we expect the music to go? This expectation can vary greatly depending on the style of music; for our purposes, we will largely be framing our study in the style of the Baroque period because this is where harmonic considerations first arose in a mature form. This is the period that was in a sense launched by the efforts of Gioseffo Zarlino, whom we have already studied, and by the efforts of his contemporaries.

The idea of *harmonic function* describes the role that a particular chord plays in the creating of a larger harmonic progression. Each chord tends to occur in some musical situations more than others, to progress to some chords more than others. These tendencies work together to create meaningful harmonic progressions, which can in turn form the harmonic foundation for musical phrases, themes, and larger formal units. Generally speaking, the function of a chord concerns the notes that belong to it (its internal characteristics), the chords that tend to precede and follow it, and where it tends to be employed in the course of a musical phrase.

A theory of harmonic functions is based on three fundamental principles:

- Chords are collections of scale degrees, as we have seen.
- Each scale degree has its own tendencies.
- The collective tendencies of a chord's scale degrees in combination is the chord's function.

The following pattern gives the most common tonal tendencies for the scale degrees of a major scale (Note: we can also change the scale to c harmonic minor and the tendencies will still hold).

The image shows a musical staff with a treble clef and a key signature of one flat (B-flat). The notes are: G4 (so), A4 (do'), Bb4 (ti), C5 (do'), D5 (la), Eb5 (so), F5 (fa), G5 (mi), Ab5 (so), Bb5 (re'), C6 (do'), D6 (la), Eb6 (do'), F6 (so), G6 (do). Arrows indicate tendencies: G4 has an arrow pointing to A4; A4 has an arrow pointing to Bb4; Bb4 has an arrow pointing to C5; C5 has an arrow pointing to D5; D5 has an arrow pointing to Eb5; Eb5 has an arrow pointing to F5; F5 has an arrow pointing to G5; G5 has an arrow pointing to Ab5; Ab5 has an arrow pointing to Bb5; Bb5 has an arrow pointing to C6; C6 has an arrow pointing to D6; D6 has an arrow pointing to Eb6; Eb6 has an arrow pointing to F6; F6 has an arrow pointing to G6; G6 has an arrow pointing to Ab6 (which is not explicitly labeled but implied by the staff line).

- 1) Which notes are not listed here as having tendencies? Why do you suppose that is?
- 2) What do you notice about all of the resolutions (the notes that others tend toward)? If we put them all together what would they make?

The Tonic Triad and its Substitutes

Given that the tendency for most notes in a scale is to go to either do, mi, or so, we should recognize the composite of these as the first, third, and fifth scale degrees, which together form the I chord in a major key – this is what we call *the tonic triad*. The ultimate harmonic goal of any tonal piece is the tonic triad, and this triad is often also the goal of many of the formal subdivisions of a composition. This is true for both major and minor keys. Observe the following progressions...



What is the role of the I (or i) chord in each of these progressions? Where do we see it occur most often?

Compare the first chord of the progression in d minor to the last chord in that progression. What do you notice about these two chords?

The tonic triad establishes the key and provides a point of resolution for the piece as a whole. In fact, depending on its voicing, the tonic triad is often the most stable chord and other chords can be understood in terms of their relative instability against the tonic. But not all chords are created equal.

Consider the VI⁶ chord and the i chord in the d minor example above. If we examine these chords closely, we can see that they share two notes in common (D and F) and that the remaining note in the VI chord (B) is only as step away from the last note in the tonic triad (A). This means that the VI chord for the most part is quite similar to the tonic and it does not create a significant amount of tension against it; rather, it compliments it.

This is true of any two triads which share two notes in common. We say that, because they are similar in this way, they function in similar ways; therefore, we can acceptably *substitute* them for each other. This makes sense in the context of the d minor example because if the tonic is meant to establish the key and provide a point of resolution, the VI chord can substitute for the tonic and function in a similar way (with a slightly different sound), establishing the tonic sound at the beginning of the progression.

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Closing: Check your understanding of the lesson by analyzing the following chords in the given key and answering the questions.



f:

How are these three chords related? What can we say then about their function? Are there any two that will not function similarly? Why or why not?

Wednesday, May 13

Music Theory Unit: Harmonic Function

Lesson 3: Review of the Tonic/ Dominant Function

Lesson 3 Socratic Guiding Questions: Keep these questions in mind as you study!

If the tonic triad established a sense of resolution, which diatonic chord(s) is perhaps most unstable against tonic? Which chord has the strongest tendency toward the tonic triad?

Objective: Be able to do this by the end of this lesson.

1. Decode tonic/dominant relationship and define goal of motion within a musical example.

Introduction to Lesson 3: Revisiting the Tonic

Yesterday we introduced *the tonic triad*, and we saw that its role was to provide a point of stability or resolution for the harmonic progression. Structurally the tonic triad is the triad built on the first scale degree of the key; because of its primacy and the underlying need in tonal music to establish resolution, the tonic can appear at the beginning of a phrase, however it's most often going to appear at the end of a phrase. Because of this we say that it is the *goal of motion* for a tonal piece of music. Before moving on, let's try writing tonic triads in the given keys below...

d: b: Ab: B:

Given the nature of tonal music, the tonic triad alone is not sufficient in order to create a meaningful harmonic progression. Once the point of resolution is established, we need a chord that will provide tension against it, otherwise there would be no harmonic motion.

To find this chord, let's reexamine the common tonal tendencies that we discussed yesterday...

so do' ti do' la so fa mi so mi' re' do' la do' so do

Provided that our goal is the tonic triad and the root of the tonic triad is *Do* (which is also called the tonic note) let's look to see which notes resolve to *Do/Do'*.

List them here: _____

- We see *So* resolving to both *Do* and *Do'* thus we can assume that this is significant.
- *Ti* resolves to *Do'*
- And *Re'* resolves to *Do'*
- We also see *La* resolve to *Do* but its stronger goal of resolution is *So* because it is a smaller interval. (Note: a strong resolution is often one that follows stepwise motion).

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Dominant Function

Taking Pythagoras as an example, let's discard *La* for the moment because it has a stronger resolution than *Do* and thus it doesn't quite fit our purpose. We are then left with only three notes *So*, *Ti*, and *Re'*. What do you notice about these notes when we put them together?

So – Ti – Re' form a triad with *So* as the root note! If we were to think of this in terms of Roman numerals, *So* is the fifth scale degree and *So – Ti – Re'* form a major triad, so we would call this a V chord. Similar to the tonic triad, this too has a name that we use to describe its function, which is *the dominant chord*.

The tonic triad is most often preceded by a V (or V^7) chord, and it would be safe to say that $V^{(7)}$ and I together are the most essential elements of any tonal work. It is not difficult to find examples in which the harmony for several measures consists only of I and V chords. The following is an example by Wolfgang Amadeus Mozart, which he wrote when he was just fifteen years old...

Mozart, *Symphony K. 114, III - Trio*

27

Violin I

Violin II

Viola

Cello

p

a: i $V^{\frac{5}{4}}$ i V

31

Vln. I

Vln. II

Vla.

Vc.

i $V^{\frac{5}{4}}$ $\frac{5}{4}$ i $\frac{6}{4}$ V i

(Optional) Listen to this piece here: <https://www.youtube.com/watch?v=cHeo37fhIdY>

Music – Choir I: Harmonic Function

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(Note: the notes that are in parentheses are not part of the chords and they serve melodic functions only. Additionally, we do not repeat Roman numerals when only the inversion changes, as with the V_5^6 in m. 32 and the i^6 in m. 33)

It would be difficult to overstate the importance of the I–V–I progression at all levels of musical structure. In fact, a complex theory developed in the first third of the twentieth century by Heinrich Schenker takes the position that any tonal composition can be understood as a n elaborated I–V–I progression. As such these chords will be most important and other chords will often provide supporting roles.

Closing: Check your understanding of the lesson by analyzing the following progressions in the given keys and then answer the questions that follow.

G: g:

- 1) What is similar between the second chord in each progression? What is different?

- 2) What chord do they both resolve to? _____

- 3) What does this mean about the function of each of these chords?

Thursday, May 14

Music Theory Unit: Harmonic Function

Lesson 4: Review Tonic – Dominant Relationships/ Predominant Function

Lesson 4 Socratic Guiding Questions: Keep these questions in mind as you study!

How does chord substitution affect the I–V–I progression? What is the role of chords that don’t substitute for either I or V?

Objective: Be able to do this by the end of this lesson.

1. Discern predominant function within chorale analysis

Introduction to Lesson 4: Review of Dominant – Tonic Relationships

As we have observed, dominant – tonic relationship provides the basis for the underlying structure of all tonal music. Further we have observed that certain chords – by virtue of them sharing two notes in common with the I or the V chord – can be substituted for the tonic or the dominant because they function in the same way (e.g. V and vii° share two notes in common, so we say that both of the chords have dominant function). Consider the opening phrase of J.S. Bach’s chorale *Alle menschen müssen sterben* BWV 262...

D: I vi I⁶ _____ V ⁷ I

At first glance we can already see the interplay between tonic and dominant. Additionally, the opening gesture I – vi – I⁶ can be understood through the lens of chord substitution. Since the vi chord shares two notes in common with the I chord we can say that it has a similar function.

So, the first three chords of this chorale are really more of a tonic expansion that firmly establish the key of D Major. (Note: again, the notes in parentheses are what we call non-chord tones and they serve a melodic purpose)

Consider the chord in the box...

- 1) How would we analyze it in the key of D major? _____

- 2) Based on where it resolves, what would we say that its harmonic function is?

- 3) What does the addition of this chord do to the overall I–V–I progression?

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Predominant Function

When we consider all of the notes inside the box together, we should see that the overall quality is a Major seventh chord built on G, which is the fourth scale degree in the key of D major. So we would analyze it as IV^{M7} .

If we treat the $I-vi-I^6$ as a tonic expansion (i.e. just a long moment of the tonic chord) and observe the V^7-I in the following measure, we can see that the IV^{M7} appears in the midst of this progression. Further we can say that its goal of motion is the V chord, or that it resolves to the dominant chord. Because of this fact, the IV chord has what we call *predominant function*, that is to say, it resolves to a dominant chord and it serves to extend the progression from I to V, providing further tension and variation.

Based on the principle of chord substitution, is there another chord that can serve as a predominant chord? Why or why not?

Closing: Check your understanding of the lesson by analyzing the chords in the boxes. Then go through and label the function of each chord underneath the Roman numeral with a **T** for tonic, **D** for dominant, and **P** for predominant.

I vi I⁶ IV^{M7} V ⁷ I I ⁷ I⁶ V ⁷ I

Friday, May 15

Music Theory Unit: Harmonic Function

Quiz: Harmonic Function

Objective: Be able to do this by the end of this lesson.

1. Demonstrate understanding of common harmonic groups and their functions by taking a written assessment.

Quiz: Harmonic Function

To assess your understanding of this week’s lessons you will complete the following quiz on harmonic function. Please allot yourself 20 minutes to take the quiz. You may use the theory reference sheet (which includes a piano keyboard and the circle of fifths), as well as the interval calculator during the quiz for your reference.

Name _____

Date _____

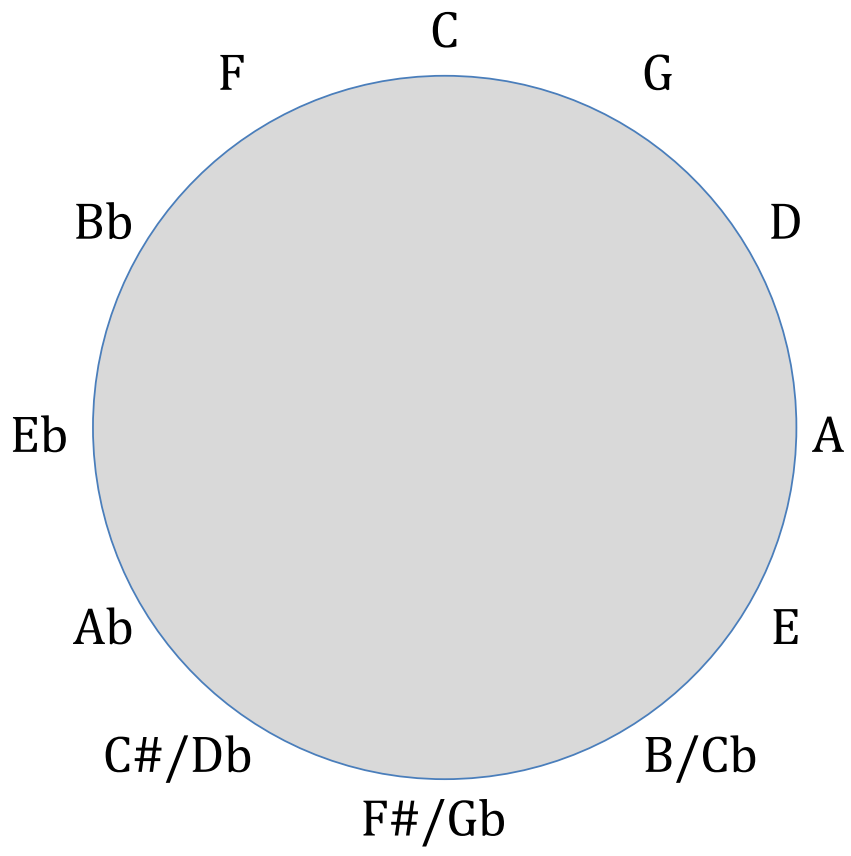
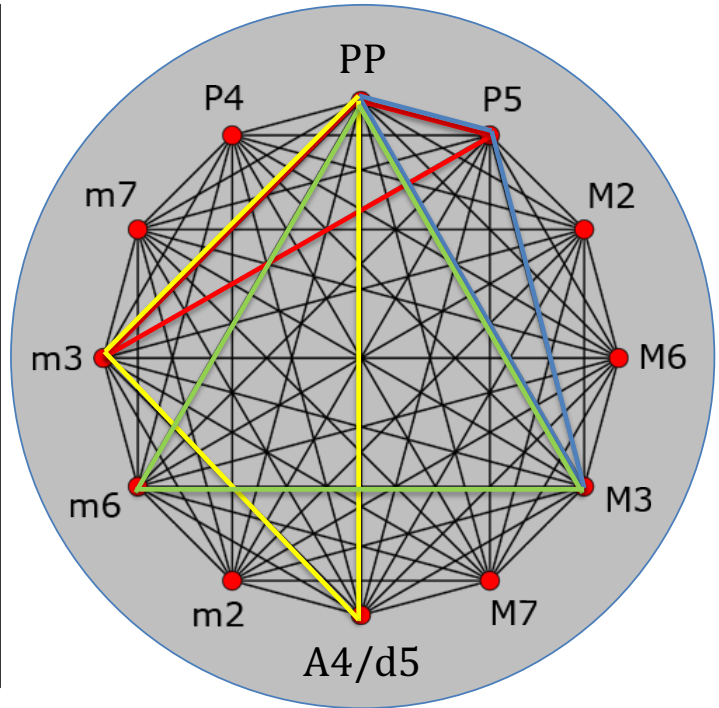
Quiz: Harmonic Function

Analyze the missing chords in the following passage using Roman numerals and adding any appropriate inversion symbols. Then label the function of each of the chords with a **T** for tonic, **D** for dominant, and **P** for predominant. The notes in parentheses are non-chord tones; you may ignore them in your analysis.

J.S. Bach: BWV 32 - *Freu dich sehr, o meine Seele*

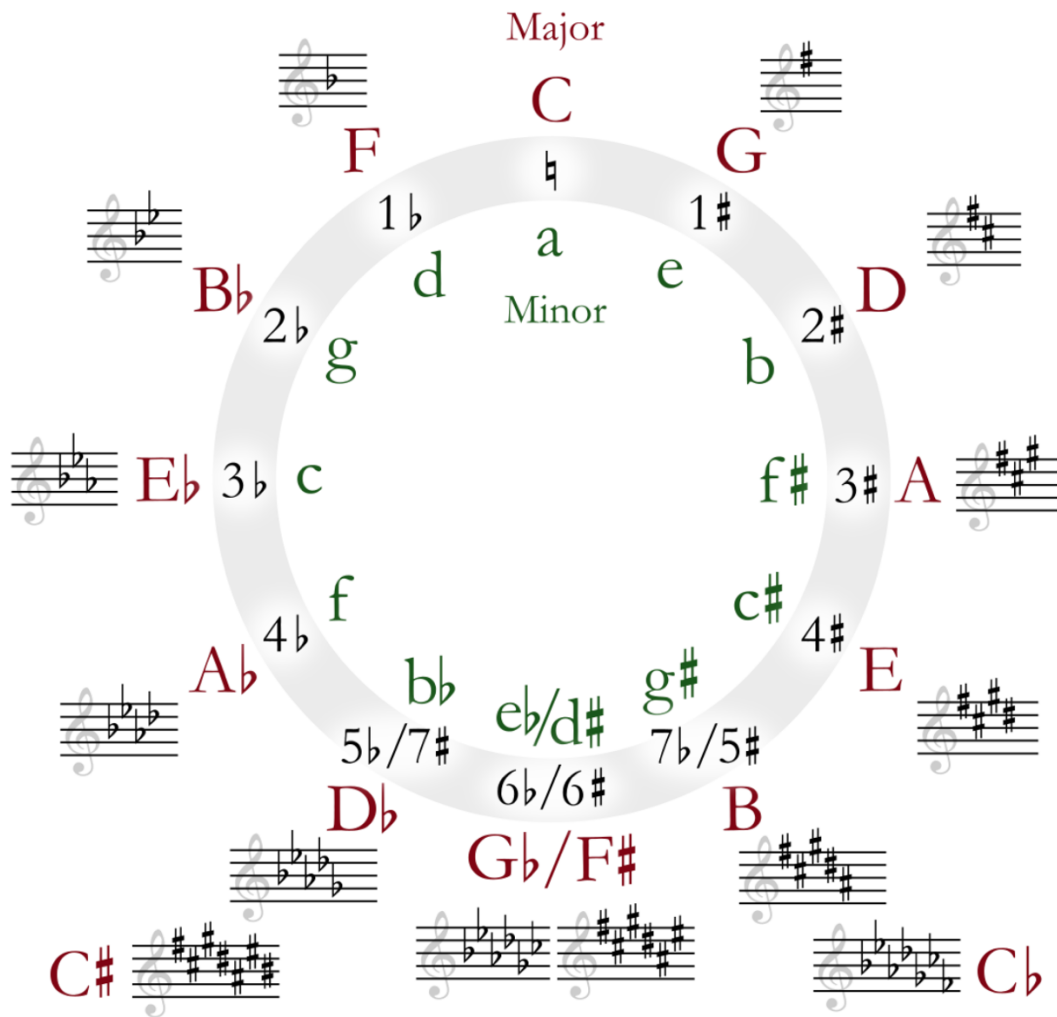
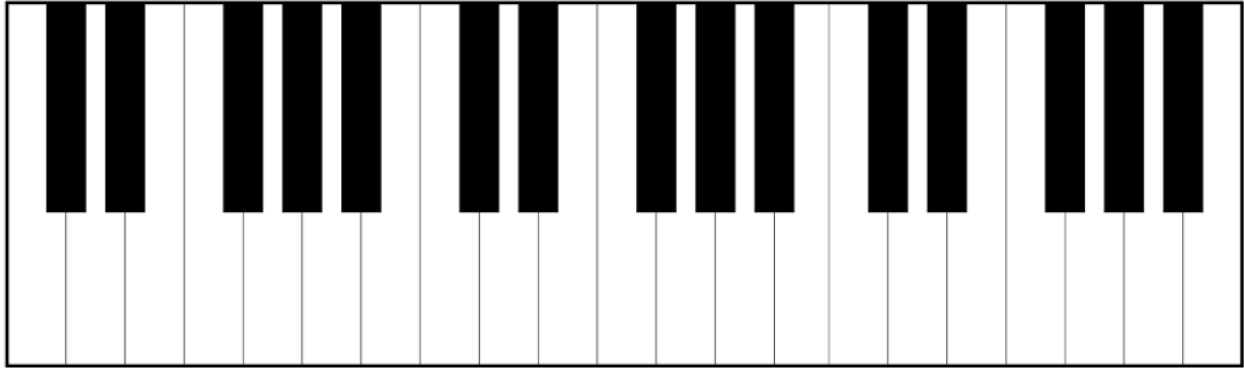
G: I V⁶ ___ V vi⁷ V⁶ ___ V ___ V⁶ I^{M7} ii₄⁶ I ___ I

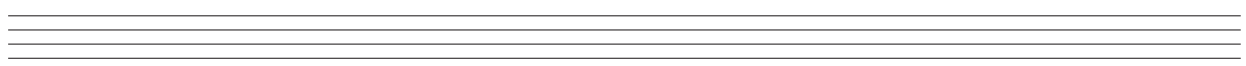
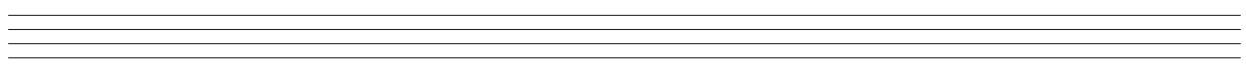
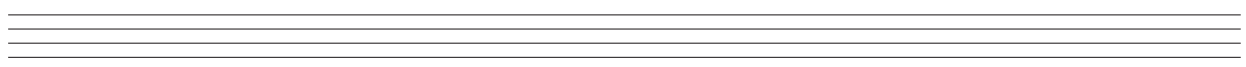
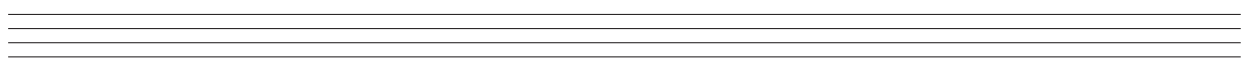
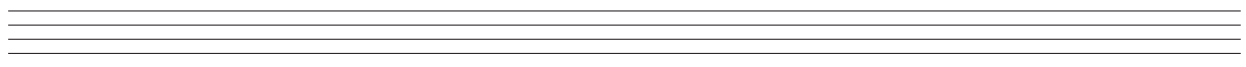
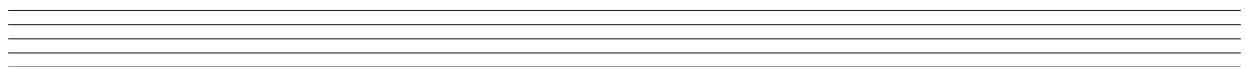
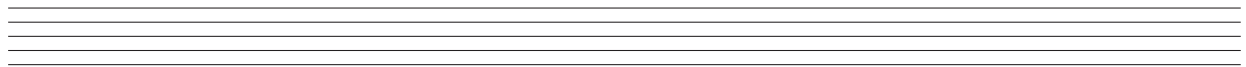
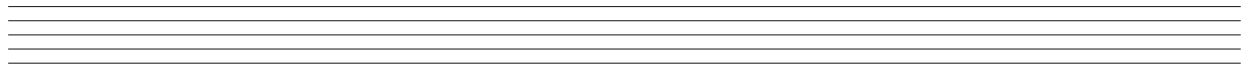
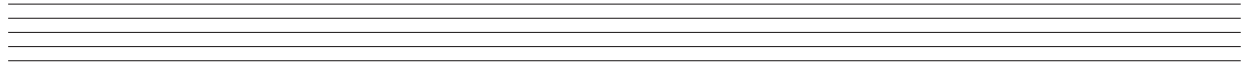
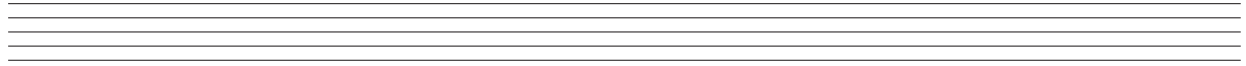
- Cut along the circumference of the circle to the right, and along the dotted line below.
 - Lay the interval structure on top of the circle of 5^{ths} at the bottom of the page to form the interval calculator.
 - When calculating intervals make sure to align prime (PP) with the lower note in the interval.



Music Theory Reference Sheet

This sheet may be used as a study aid during the week's lessons





Answer Key

Monday, May 11

- 1) In Major keys, how many of the five common seventh chord types are diatonic to the key? How many are diatonic in minor keys?

*In major keys only 4 are diatonic.
 All 5 types appear in minor.*

- 2) What is the quality of the chord built on scale degree 4 in a minor key? Does its quality change in major keys?

the IV chord is minor in minor keys. It becomes a IV (major) in major keys.

- 3) On which scale degree in the diatonic seventh chord the same in both major and minor keys?

It is the same on the V⁷ chord.

2

The image shows a musical staff with four chords. The first chord is D major (V⁶), the second is d minor (ii^{6/5}), the third is F# minor (i), and the fourth is Bb minor (vi⁴). The chords are written in a sequence that illustrates the resolution of the ii^{6/5} chord to the i chord.

D: *V⁶*

d: *ii^{6/5}*

F#: *i*

Bb: *vi⁴*

Tuesday, May 12

- 1) Which notes are not listed here as having tendencies? Why do you suppose that is?

Mi and Do; they are both the stable parts of the tonic triad.

- 2) What do you notice about all of the resolutions (the notes that others tend toward)? If we put them all together what would they make?

They all resolve to Do, Mi, or So which makes a I chord.

6

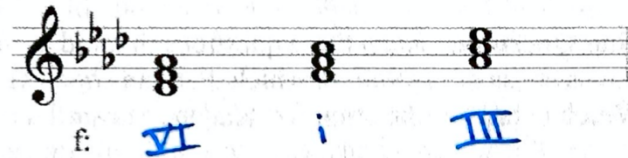
What is the role of the I (or i) chord in each of these progressions? Where do we see it occur most often?

(Answers will vary)

Compare the first chord of the progression in d minor to the last chord in that progression. What do you notice about these two chords?

they share two notes in common.

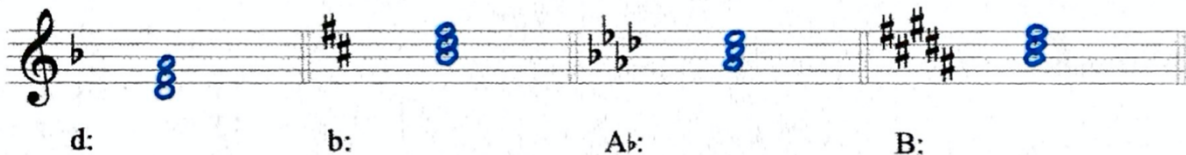
Closing: Check your understanding of the lesson by analyzing the following chords in the given key and answering the questions.



How are these three chords related? What can we say then about their function? Are there any two that will not function similarly? Why or why not?

(Answers will vary)

Wednesday, May 13



Provided that our goal is the tonic triad and the root of the tonic triad is *Do* (which is also called the tonic note) let's look to see which notes resolve to *Do/Do'*.

List them here: *So, Ti, Re, La*

Closing: Check your understanding of the lesson by analyzing the following progressions in the given keys and then answer the questions that follow.

G: IV_4 V^b I g: iv_4 vii^{ob} i

- 1) What is similar between the second chord in each progression? What is different?

They share two notes in common; they both resolve to I/i

They are different numerals and qualities.

- 2) What chord do they both resolve to? I/i (tonic triad)

- 3) What does this mean about the function of each of these chords?

they function similarly.

Thursday, May 14

Consider the chord in the box...

- 1) How would we analyze it in the key of D major? IV^{M7}

- 2) Based on where it resolves, what would we say that its harmonic function is?

it resolves to the dominant chord.

- 3) What does the addition of this chord do to the overall I-V-I progression?

it extends the progression.

Based on the principle of chord substitution, is there another chord that can serve as a predominant chord? Why or why not?

Yes, the ii chord can. Because it shares two notes with the IV chord.

Closing: Check your understanding of the lesson by analyzing the chords in the boxes. Then go through and label the function of each chord underneath the Roman numeral with a **T** for tonic, **D** for dominant, and **P** for predominant.

I vi I⁶ IV^{M7} V ⁷ I I ⁷ vii^{b5} I⁶ ii⁷ V ⁷ I