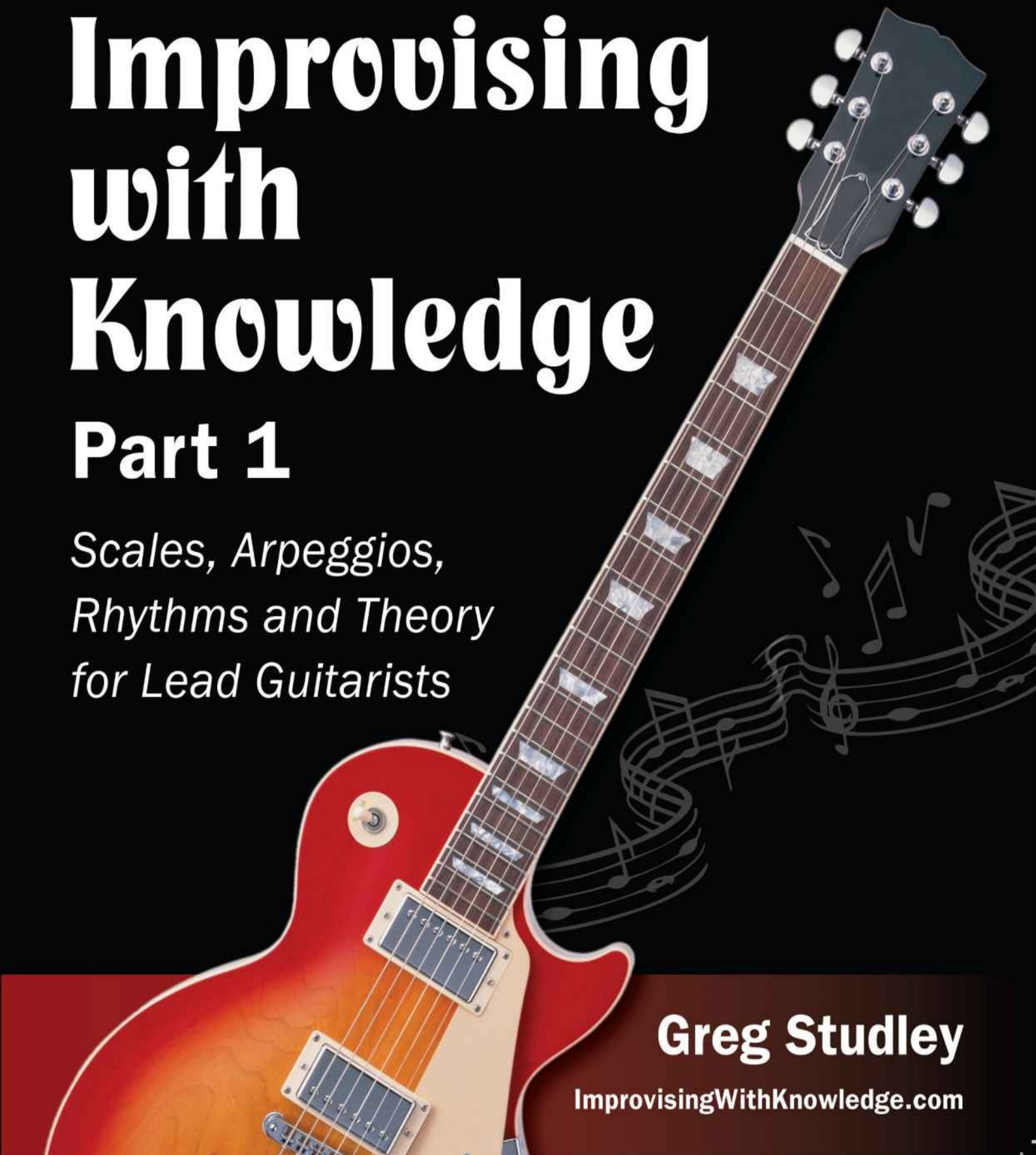
A Guitarist's Guide to

Improvising with Knowledge

Part 1

Scales, Arpeggios, Rhythms and Theory for Lead Guitarists



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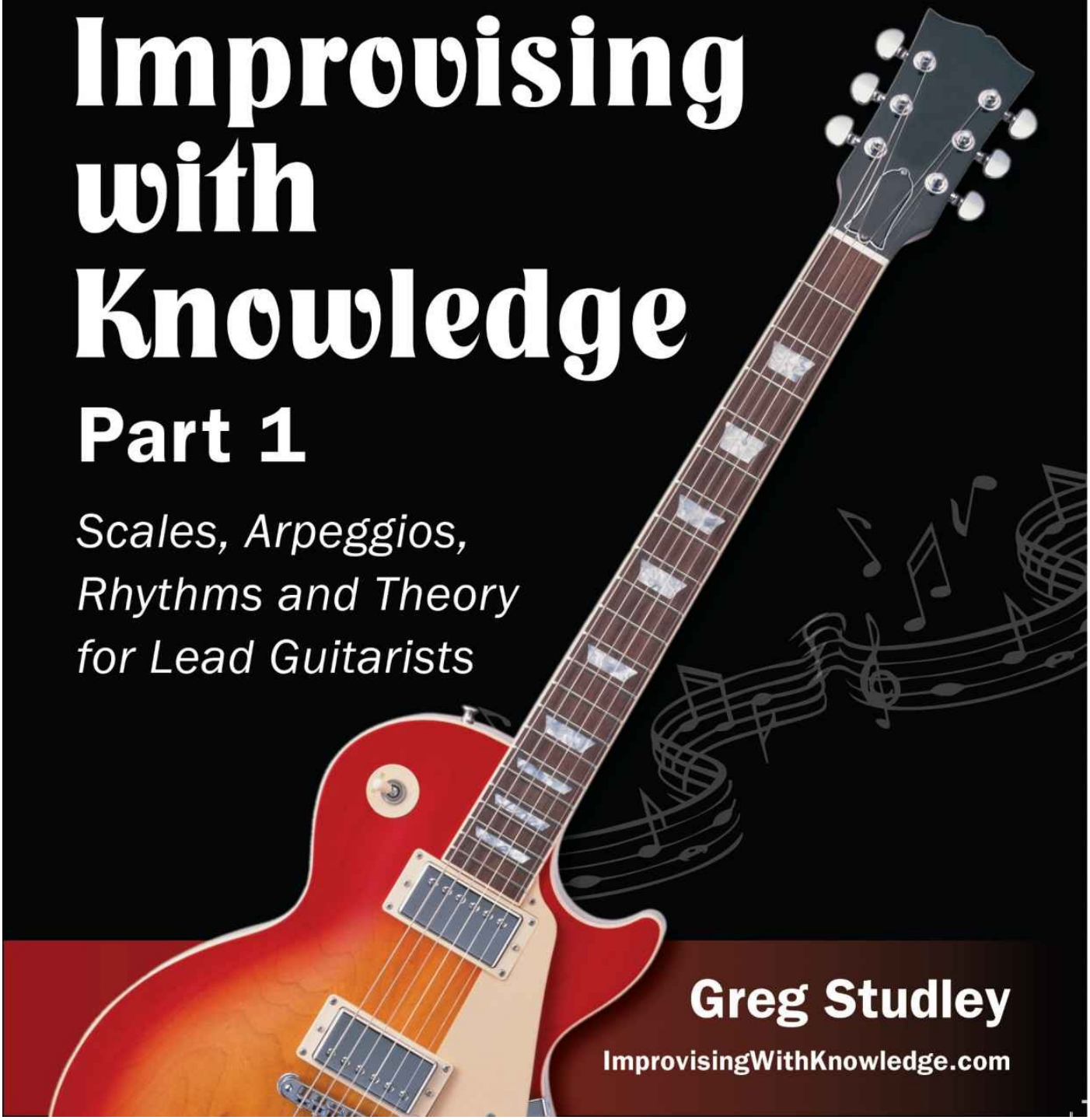

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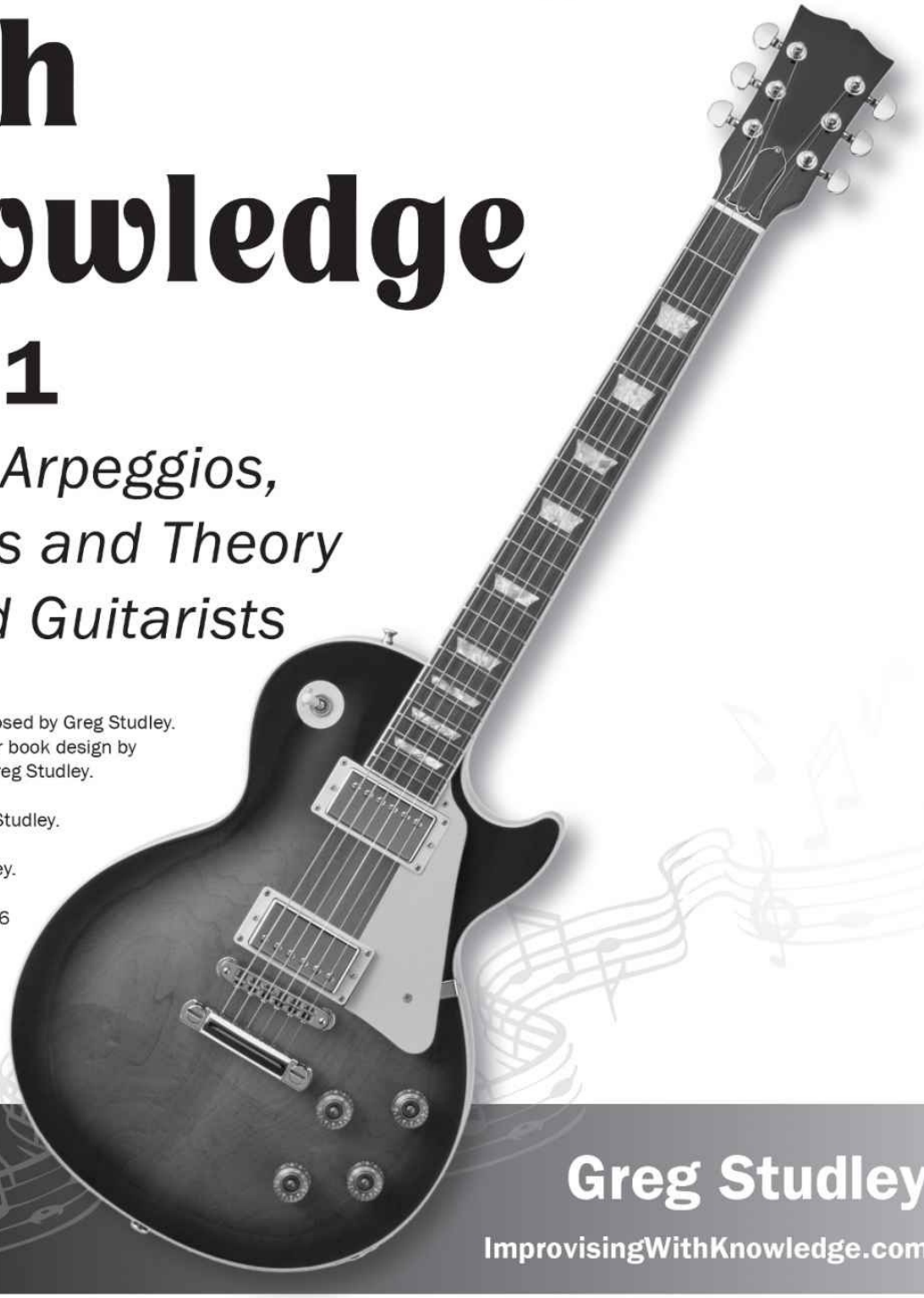

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Acknowledgments

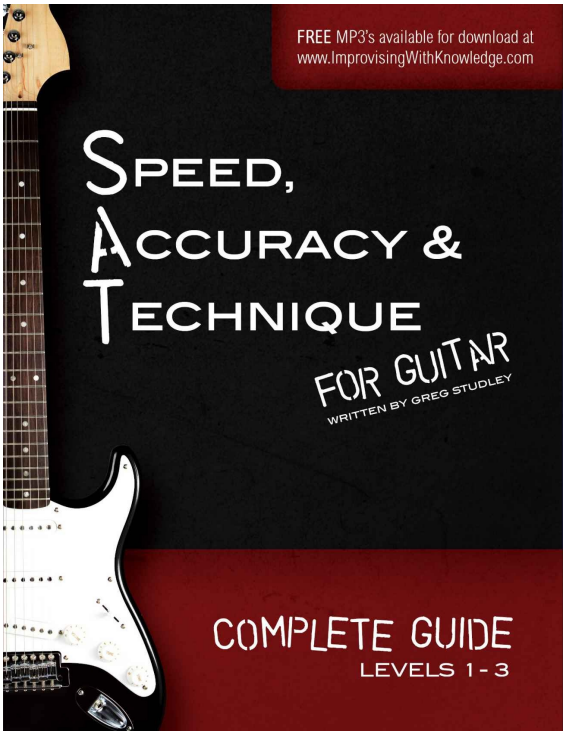
First and foremost, I would like to thank my family and friends for all of their support over the years. I am especially grateful to my best friend and partner in life, Tiffany, for her immense patience and honest opinions over the last few years while I was composing the text and music for this book, filming and editing instructional videos, and building **ImprovisingWithKnowledge.com**. Your support and positive encouragement has helped me to succeed in this endeavor.

Thank you to all of the great musicians and instructors that I have had the pleasure of crossing paths with over the years. You have all made me into a better musician and pushed me to always play my best.

To all of my students past and present, it is you who have helped me to become the music instructor that I am today. Finally, I would like to thank all of those students who believed in their guitar instructor and were willing to learn from these pages, nearly a year before they were ever published. I have seen and heard your progress, and that has solidified my dream that the system embedded within these pages is one that can produce amazing results. Thank you Bharani Ganesan, Shariq Mobin, Susan Grabowski, Jordan Wong, Nick Thayer, and Elias Mathus.

Also by Greg Studley…

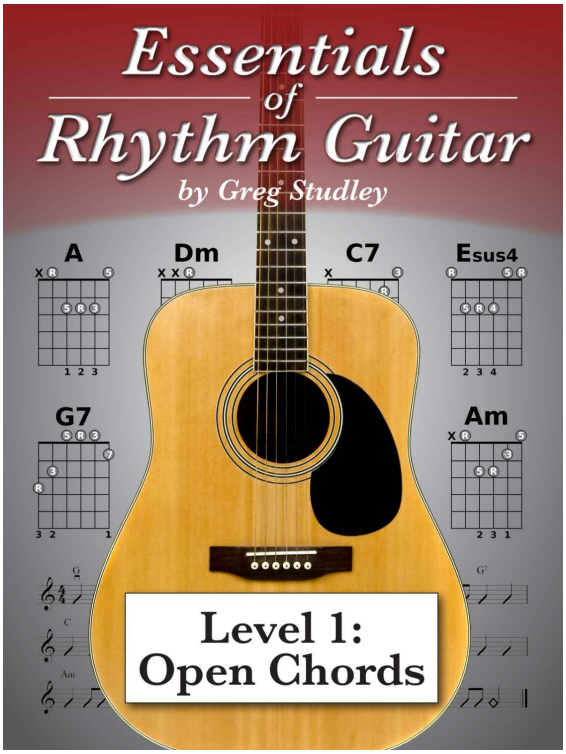
Speed, Accuracy & Technique for Guitar



Regardless of the musical genre that you are exploring, whether it be jazz, blues rock, metal, country or otherwise, your speed, accuracy and technique should all be in harmony to allow you to play your best. These exercises will not only train the fingers of your fretting hand, but will also enhance your picking techniques and create synonymous movement between the two.

Also by Greg Studley…

Essentials of Rhythm Guitar



The guitar is first and foremost a rhythm instrument. Every guitarist should have a solid understanding of chord shapes, the best fingerings to be used, how to seamlessly switch between them, and different strumming patterns that may be used. This book series covers all of these elements and more, ranging from the most common chords of the guitar to more complex barre chords and jazz chords.

Im·pro·vise

verb \ˈim-prə-ˌvīz also ˌim-prə-ˈ\

- to speak or perform without preparation
- to make or create (something) by using whatever is available

with

preposition \ˈwith, ˈwith, wəth, wəth\

- used to say that people or things are together in one place
- used to say that two or more people or things are doing something together or are involved in something
- having (a particular characteristic, possession, etc.)

Knowl·edge

noun \ˈnä-lij\

- information, understanding, or skill that you get from experience or education
- awareness of something
- the state of being aware of something

Chapter 1

Basic Rhythmic Understanding

Part 1: The Rhythmic Aspect of Music

Before any discussion of improvisation can begin, some basic rhythmic understanding must be covered. This includes when to produce a tone, when to be silent, and what the duration of each should be. A ***note*** is used to represent a tone, and a ***rest*** is used to represent silence. The duration of all the notes and rests are determined by their value. Here are three of the most basic values in music:

Whole Value

Whole notes are represented as



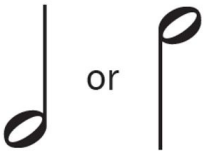
Whole rests are represented as



The whole value can be evenly divided into two half values.

Half Value

Half notes are represented as



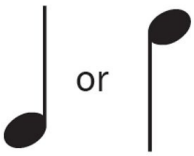
Half rests are represented as



The half value can be evenly divided into two quarter values.

Quarter Value

Quarter notes are represented as

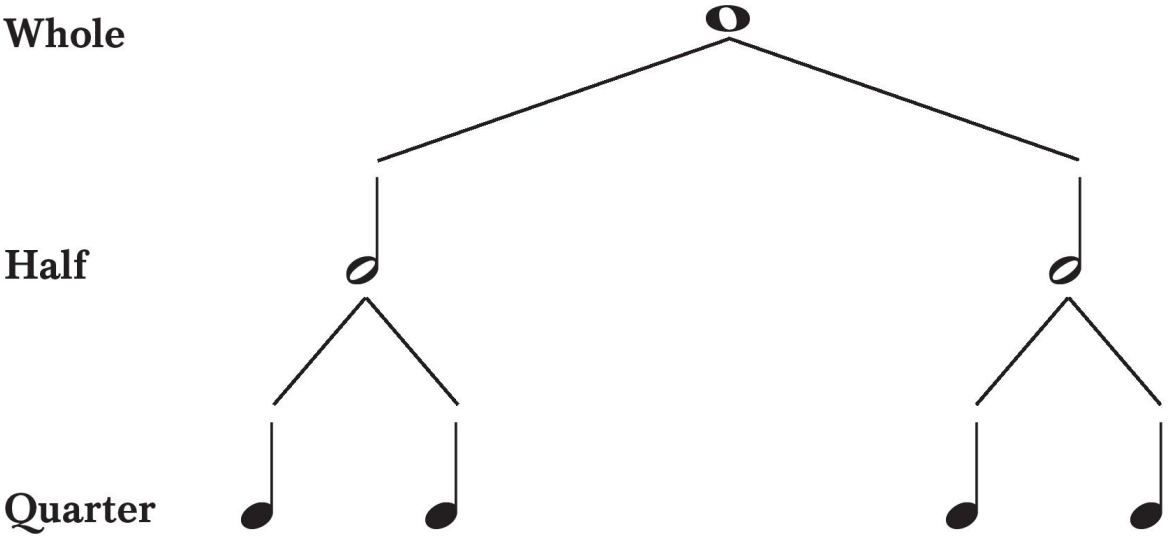


Quarter rests are represented as

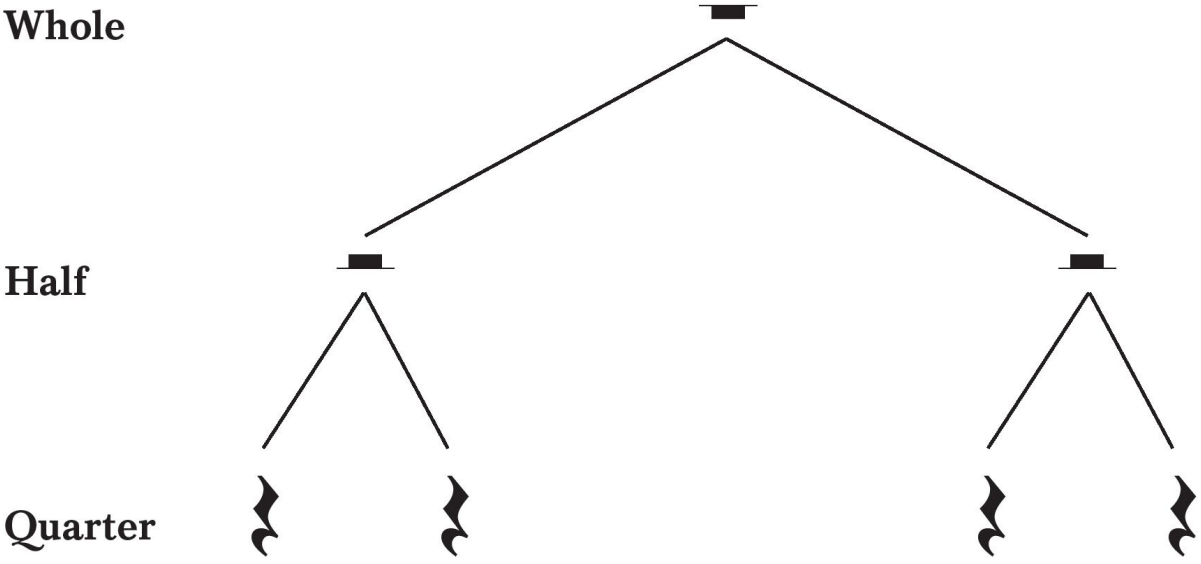


The following diagrams can be used to further understand how the different values of notes and rests relate to each other.

Notes



Rests



Measures are groups of notes and/or rests enclosed by vertical ***bar lines*** that are used to separate music into sections of equal value. These divisions are determined by the ***meter***, or number of beats per measure. A beat is considered to be a strong pulsation of sound, that is often constant throughout a piece of music. Modern music will commonly have either two, three, or four beats per measure.

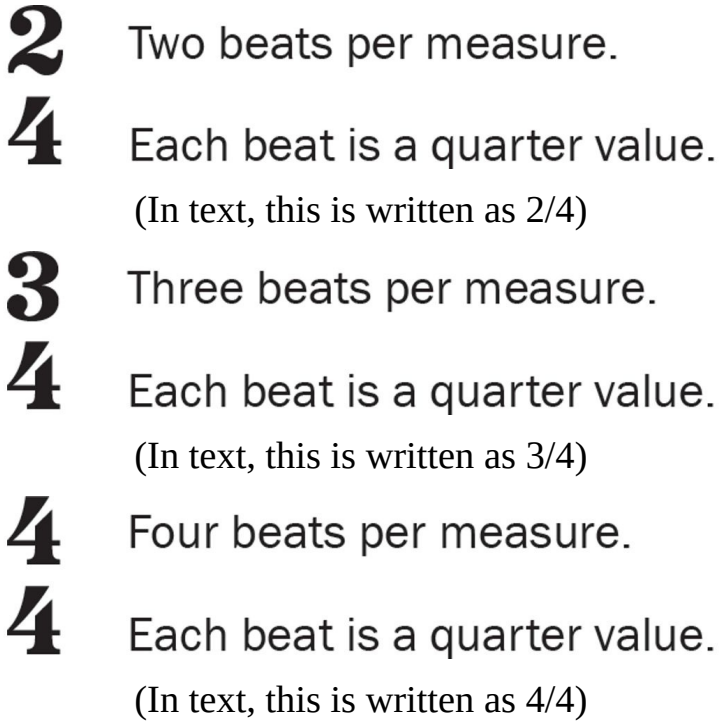
2 beats per measure: | **1 2** | **1 2** | **1 2** | **etc...**

3 beats per measure: | **1 2 3** | **1 2 3** | **etc...**

4 beats per measure: | **1 2 3 4** | **1 2 3 4** | **etc...**

The ***time signature*** of a song, represented by two vertically-stacked numbers, will

determine both the meter and what value will define the beat. The top number designates the meter while the bottom number designates the value of the beat. Time signatures will always be found at the beginning of a piece of music. Here are some of the most commonly used time signatures:



(In text, this is written as 2/4)

(In text, this is written as 3/4)

(In text, this is written as 4/4)

The speed of the beat for any musical piece is determined by its ***tempo***, which is represented by a number. This number is a description of ***beats per minute (bpm)***. A simple way to understand this concept is to think of how this relates to a clock. All clocks have a definite speed of 60 seconds for every minute of time. If the beat of a song is to move at the same speed as a clock, then the song's tempo is 60bpm. If a song's beat is slower than a clock, its tempo is less than 60bpm. If a song's beat is faster than a clock, its tempo is more than 60bpm.

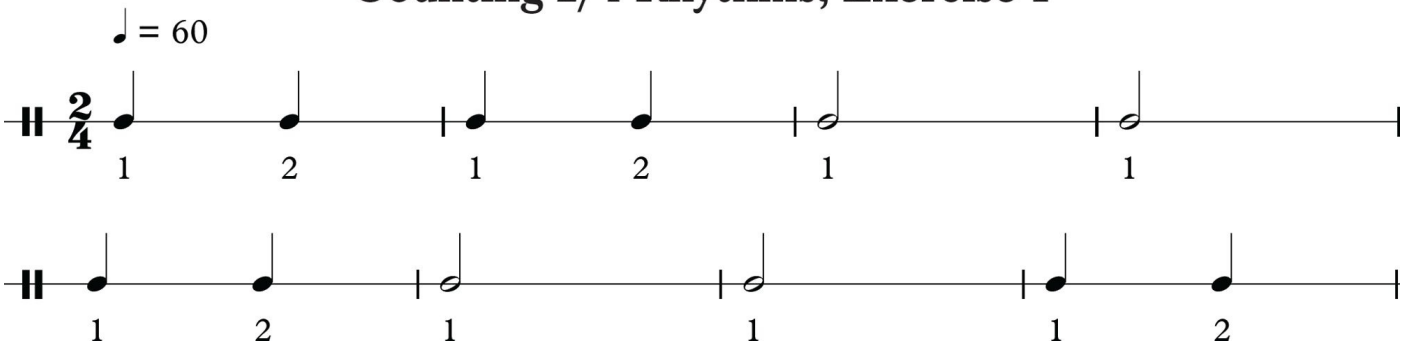
All exercises and examples throughout this book will include a specific tempo for which they should be accurately played. These tempos will be notated above the first measure of the piece. A ***metronome*** is a device that can be set to a specific number of beats per minute and will emit the sound of clicks or beeps to help you stay at the specified tempo. It is highly recommended that you use a metronome or similar device (such as a drum-machine) to play each exercise at its notated tempo.

Part 2: Counting 2/4 Rhythms

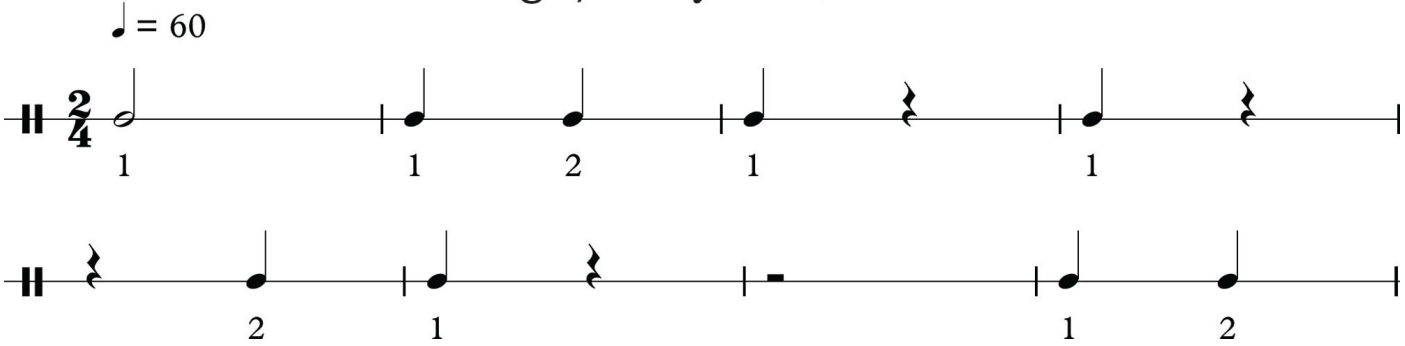
It is very important to be able to verbally count a rhythm before being able to play it on your instrument. By counting aloud, you can understand the rhythm by seeing, speaking, and hearing it simultaneously. Use the following method for counting the next three exercises:

- Count the appropriate beat number for which a note initially occurs, and continue to hold the sound for the remainder of the note's value. A quarter note should receive a number that is spoken quickly, and a half note should receive a number that is held with the voice (similar to singing). Do not continue to count the beats for which a note's value is more than one beat.
- Rests should first be counted as "rest." Once you become comfortable with where the rests are, they should be completely omitted from the counting.

Counting 2/4 Rhythms, Exercise 1

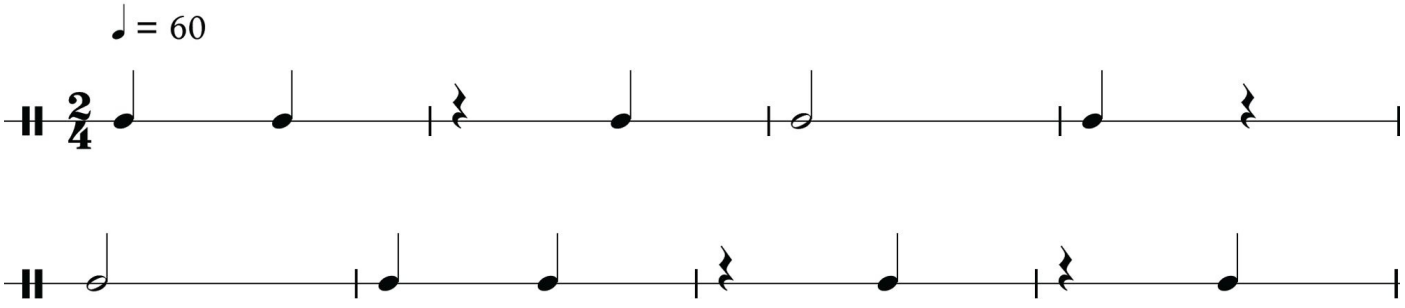


Counting 2/4 Rhythms, Exercise 2



(Although beat numbers have been omitted from the next exercise, you should continue to count them aloud)

Counting 2/4 Rhythms, Exercise 3



Part 3: Ties & Dotted Half Notes

A ***tie*** is a curved line used to connect two or more notes of the same pitch that are in succession, combining their value and indicating that they are to be played as one long note. These examples show the numerous ways in which ties may be applied.

Tie Example 1

Ties can connect notes within one measure. This tie connects the half note and the quarter note to have a combined value of 3 beats.



Tie Example 2

Ties can connect notes across the bar line of sequential measures. This tie connects the two half notes to have a combined value of 4 beats.



Tie Example 3

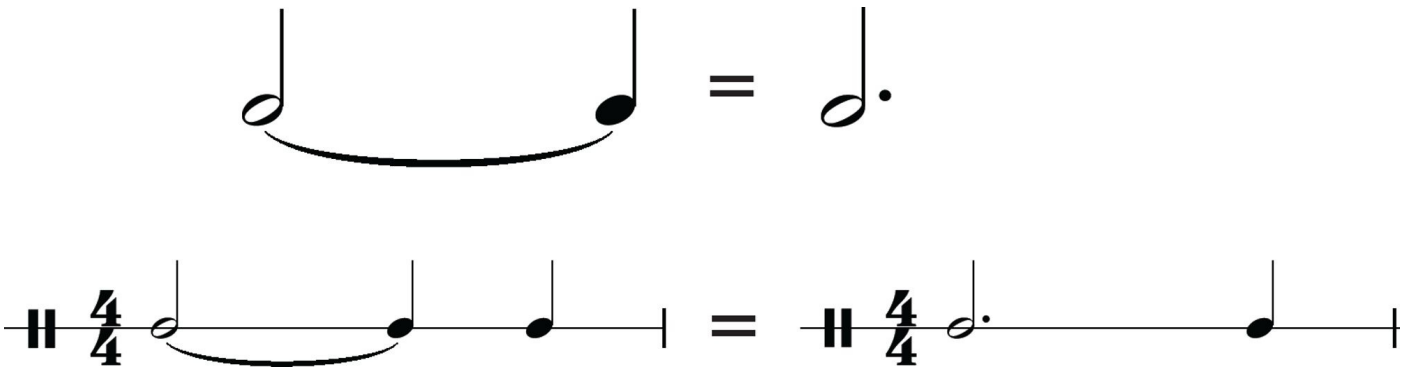
Ties can be used to connect many notes in succession, even across numerous measures of music. These ties connect the quarter note, whole note, and half note to have a combined value of 7 beats.



Remember: Ties can *only* connect notes of the *same pitch*. It is not possible to connect two different notes together using a tie. Therefore, there are two ways to tie notes on the guitar: 1) continuously hold a finger down on the same fret of the same string, or 2) continue to let an open string ring out without interrupting it.

Dotted Half Note

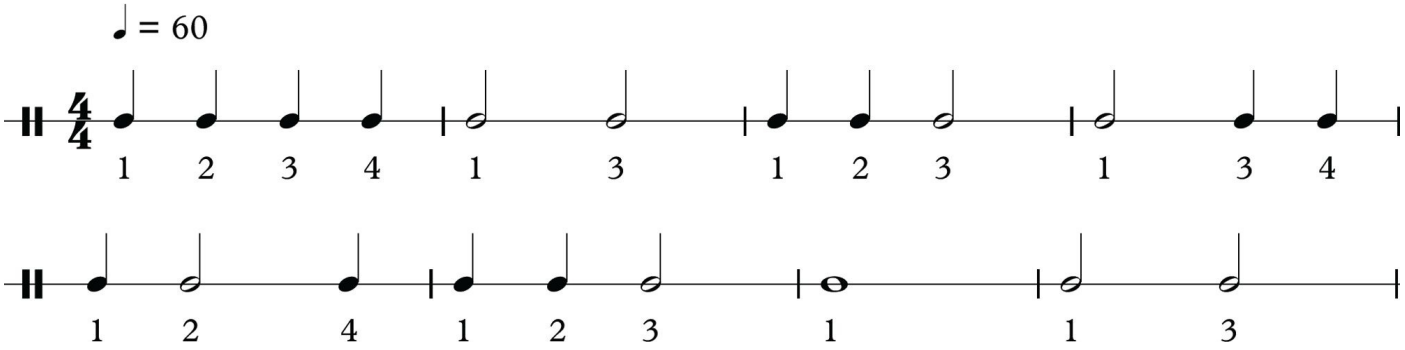
Just as ties can connect notes together to create one longer note, a dot may be placed after a note to increase its overall value by 50%. Therefore, placing a dot after a half note creates a note that lasts for three beats in a 4/4 time signature. This note is called a ***dotted half note***, and it has the exact same value as a half note that is tied to a quarter note.



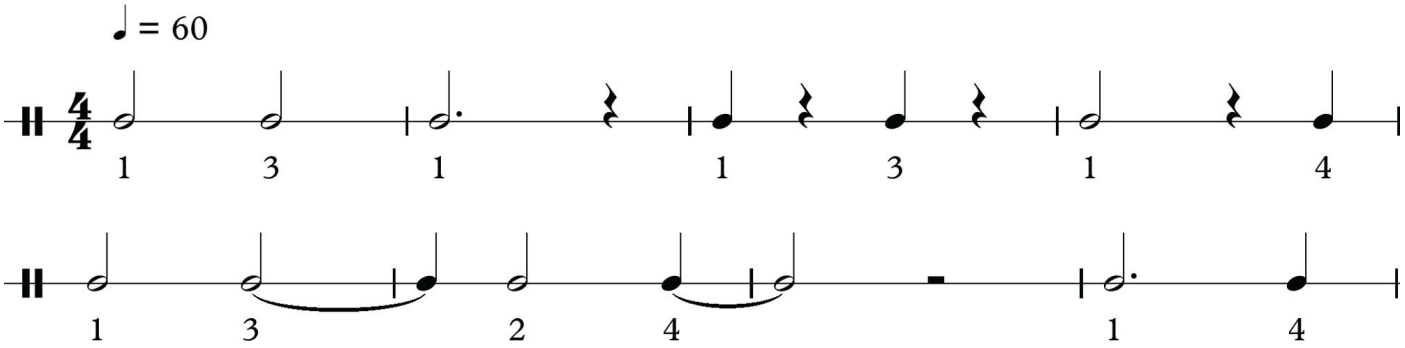
Part 4: Counting 4/4 Rhythms

The following exercises may be counted in a similar fashion to those in Part 2. When notes are tied, be sure to only count the beat number for which the first note initially occurs, and continue to hold the sound for the remainder of the note's tied value. Do not count the beat number of the second tied note aloud, as this note is just a continuation of the first.

Counting 4/4 Rhythms, Exercise 1

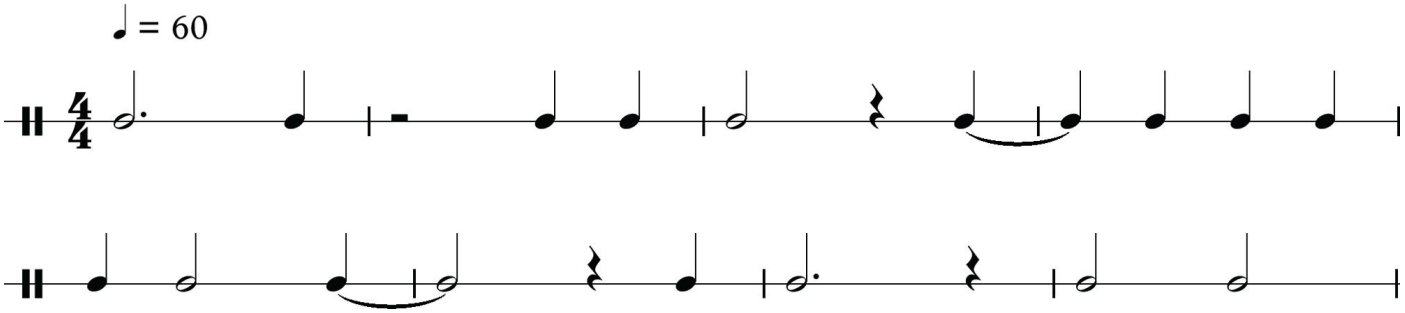


Counting 4/4 Rhythms, Exercise 2



Although beat numbers have been omitted from the next exercise, you should continue to count them aloud.

Counting 4/4 Rhythms, Exercise 3



Chapter 2

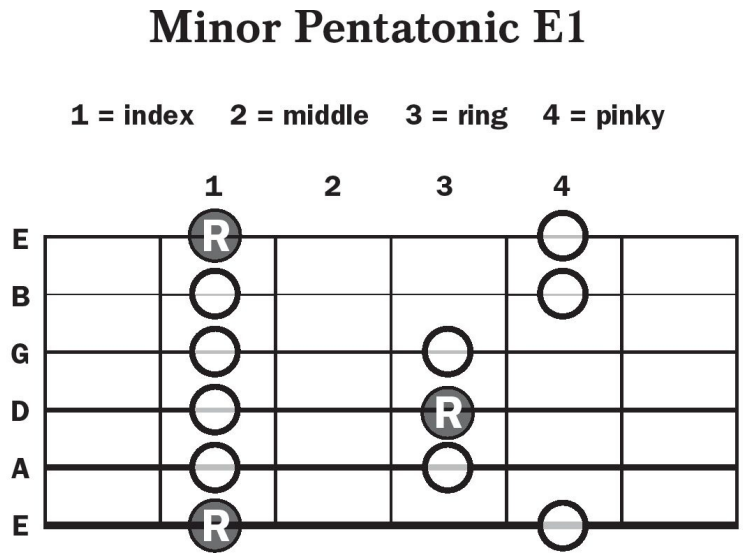
The Minor Pentatonic Scale Shape E1

A ***scale*** is a sequence of musical notes that is used to create melodies, or as the notes are combined, can also create chords. The most fundamental note and starting point of a scale is called its ***root***. The scale sequence starts at the root and has the length of an ***octave***, the distance from any note to the next highest or lowest note of the same name. If a scale is to be played for more than one octave, the sequence simply repeats again. Most songs are based within a musical ***key***, which contains all of the notes of the scale. For example, the key of C major contains all of the notes of the C major scale.

The ***pentatonic scale*** is one which contains five notes per octave. This is different from the most common scales, the major scale and natural minor scale, which both contain seven notes. The pentatonic scales are actually variations of these seven-note scales, with two notes removed. These two notes have an unstable sound against their relative chords and may therefore create the most ***dissonance***, or tension, in the music. So, the pentatonic scales sound very smooth and contain very few dissonant notes.

Part 1: The Minor Pentatonic Scale Shape E1

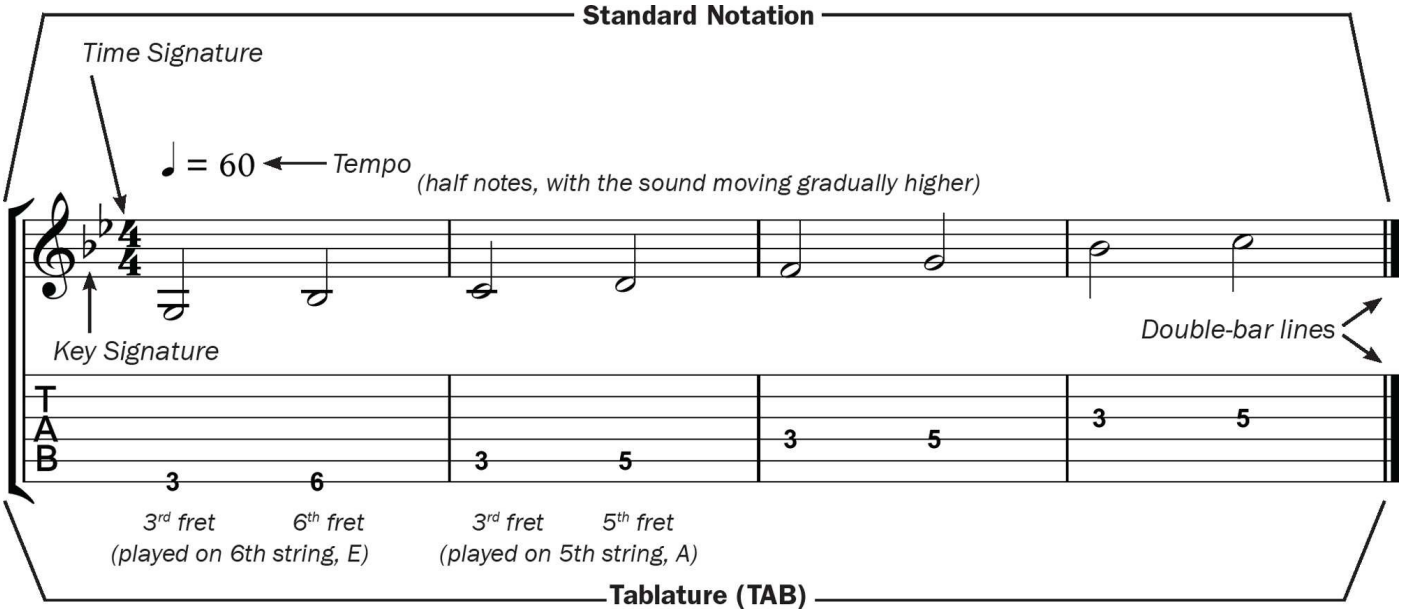
The minor pentatonic scale can be used for improvisation over all minor chords and some of their variations, including minor 7th chords (min7 or m7). Because of how the notes of the scale fit with these minor chords, there will be very little dissonance, and will therefore produce a quality arrangement of notes for improvising. Below is the most commonly used minor pentatonic scale shape, which spans across four frets. It is called ***Minor Pentatonic Scale Shape E1*** ("E" because the lowest root is on the E-string and "1" because that root is played with the 1st finger), and may be abbreviated as "Min Pent E1." The appropriate finger numbers are written above the frets. The scale uses fingers 1, 3 and 4.



It is very important to realize that this scale shape has three roots and to memorize their locations. When improvising, these will be the notes that will have the least amount of dissonance, and will therefore resonate extremely well against the chord. In short, these are your "safest" notes to play.

Part 2: Min Pent E1 Exercises

Practicing scales is essential to becoming comfortable with their finger patterns, as well as the locations of the roots. All scale exercises in this book will be notated with standard treble clef notation (notes located on a music staff with rhythmic values) and Tablature (TAB). The notes will define the rhythm that should be played, while the TAB will explain which strings and frets should be played. The time signature of each exercise will be located at the beginning of the standard treble clef notation, where there may also be a key signature (which affects the notes, but not the TAB). Each exercise will also include a tempo to describe the speed at which it should be played, and will end with a double-bar line. Below is a short description of how the notation will look.



The Minor Pentatonic Scale Shape E1, along with all other scales introduced in this book, may be thought of as scale “shapes” that can be moved to different locations on the guitar neck. The following scale exercises will get you comfortable with playing Min Pent E1 in this manner. All scales will begin and end on a root — this method helps to reinforce where the roots are located. Be sure to learn each exercise at its notated tempo before going to the next section.

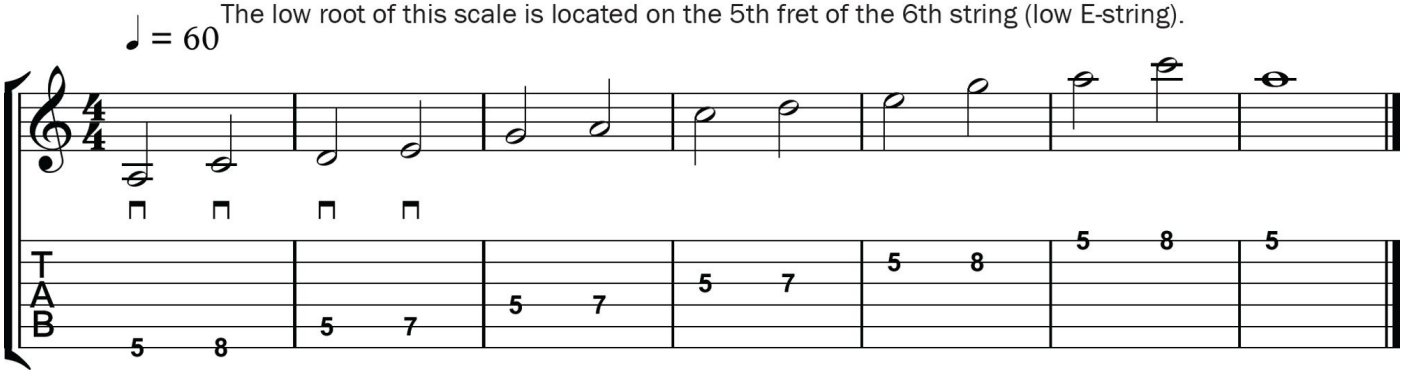
*Notes occurring on the beats should be picked using downstrokes, which will be notated above the TAB.

Downstroke



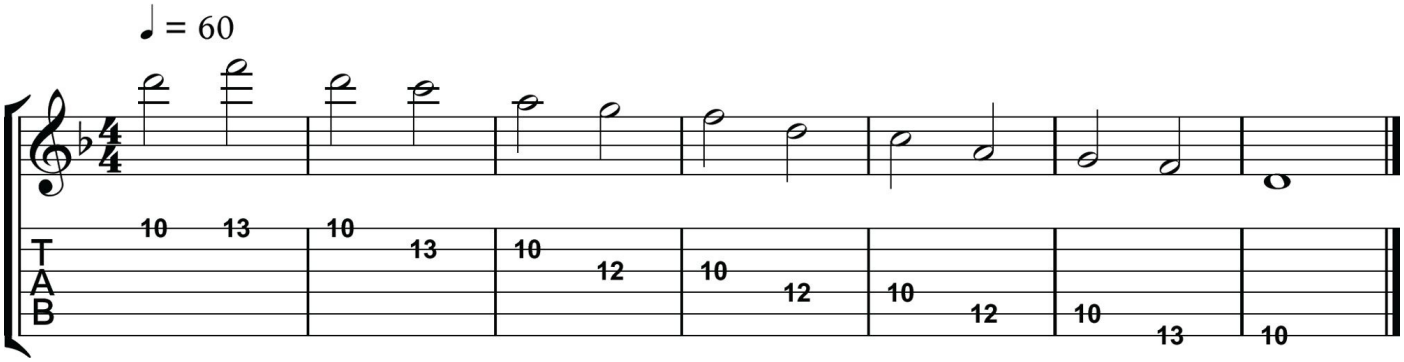
Playing Min Pent E1, Exercise 1

The low root of this scale is located on the 5th fret of the 6th string (low E-string).



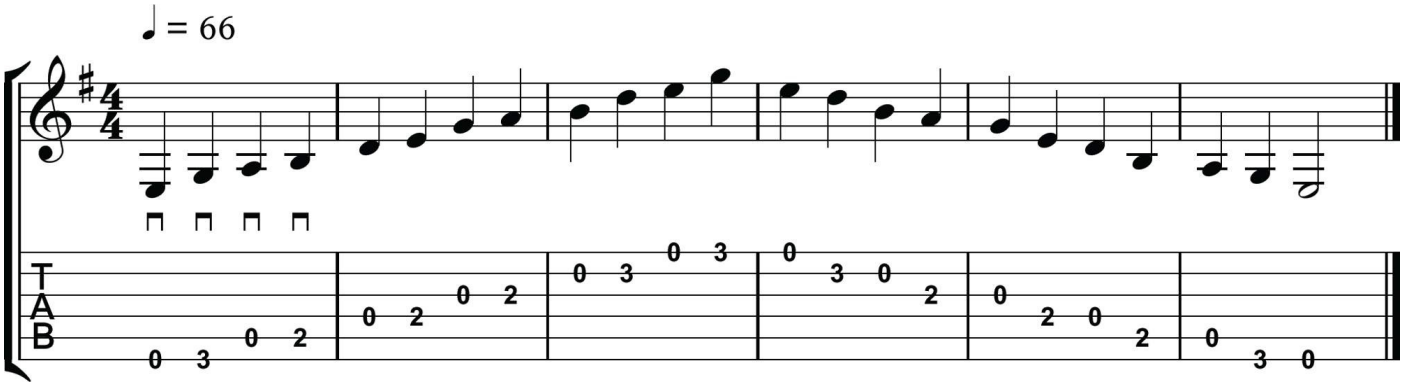
Playing Min Pent E1, Exercise 2

The high root of this scale is located on the 10th fret of the 1st string (high E-string).



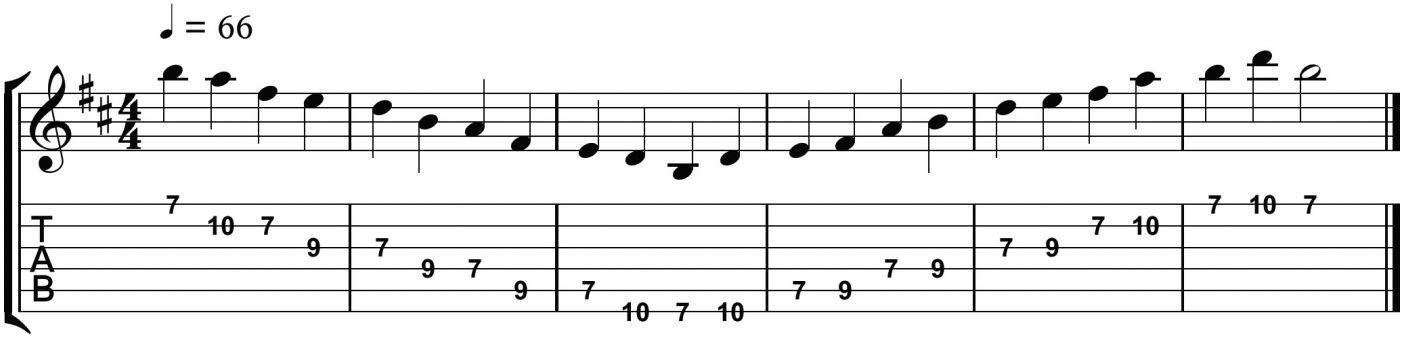
Playing Min Pent E1, Exercise 3

The low root of this scale is the open 6th string.
For best results, use 2nd finger for fret 2 and 3rd finger for fret 3.



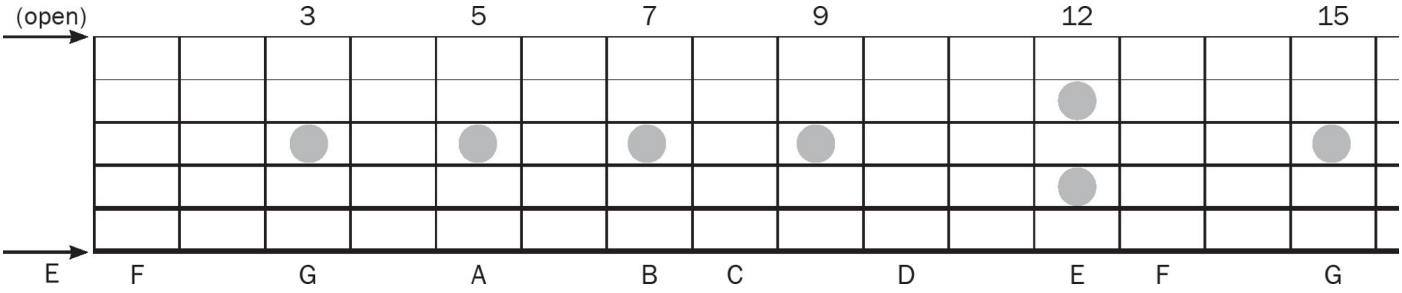
Playing Min Pent E1, Exercise 4

The high root of this scale is located on the 7th fret of the 1st string.



Part 3: Natural Notes Across the E-Strings

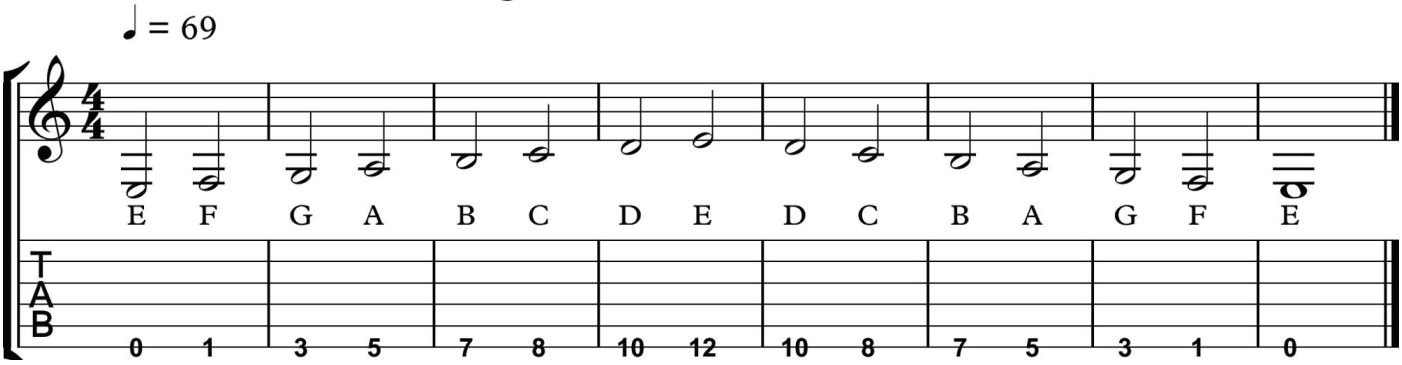
The following diagram shows all of the natural notes across the low and high E-strings of the guitar up to the 15th fret. The most common arrangement of fretboard dots is in the middle of the guitar neck and their relative fret numbers are written above. Because both E-strings contain roots of the Min Pent E1 scale, the knowledge of this sequence of notes is essential to knowing where to move the scale shape.



- There are two groups of notes that occur right next to each other and do not have an unlabeled fret in between them — 1) E & F, and 2) B & C. Because these notes will always occur next to each other without exception, it is very important to memorize this aspect of the note sequence.
- Also, notice that E is the open string and is also the 12th fret, where the double-dot occurs. This is used to indicate that the entire note sequence has reached an octave and will now repeat.

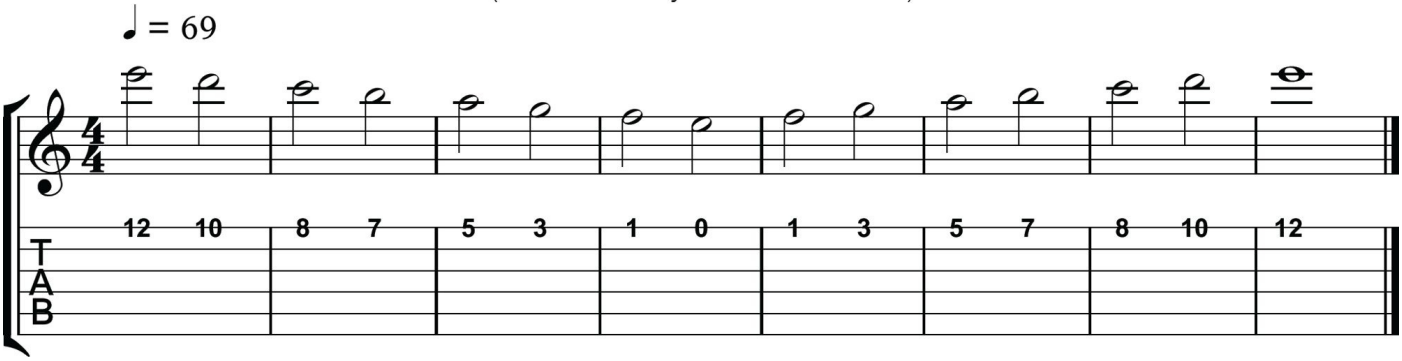
Use the following exercises to become comfortable with the note sequence on the E-strings. Say the note names aloud as you play and use only the index finger of your fretting hand to play these notes.

E-String Natural Notes, Exercise 1



E-String Natural Notes, Exercise 2

(Continue to say note names aloud)



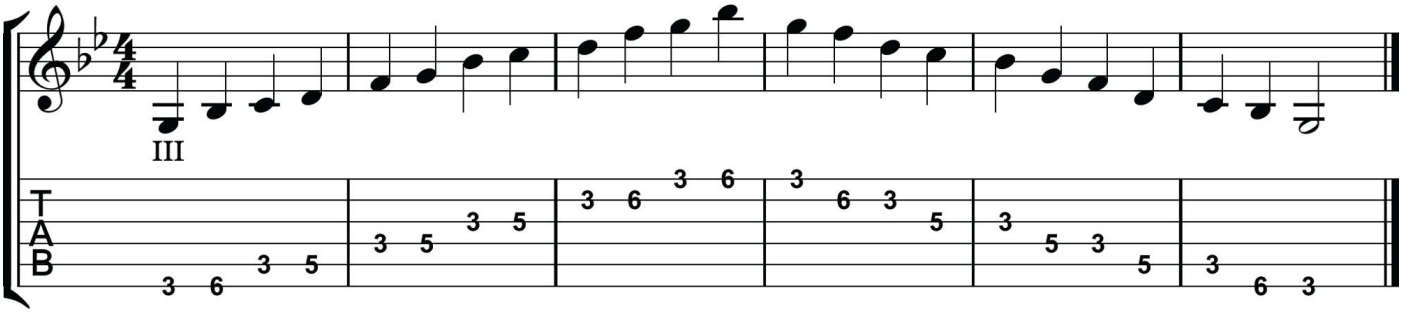
Part 4: Moving Min Pent E1

Now that you can play the Minor Pentatonic Scale Shape E1 and have a solid understanding of the natural notes across the E-strings, you have the ability to play seven different minor pentatonic scales — E, F, G, A, B, C, and D. For example, to play a G minor pentatonic scale, put one of your E-string roots on the note G (3rd fret) and play the scale.

At this point, it is important to know how to describe your hand position on the neck of the guitar. Your ***hand position*** is a description of what fret should be played by the first (index) finger of your fretting hand. Your other three fingers should be assigned to the next three frets. Hand positions are notated in the form of roman numerals underneath the music staff, above the TAB. Because TAB notates which fret to play on a string but not which finger to use, this is a very helpful way to describe which fingering should be used, while avoiding modern numbers that may become confusing next to the TAB.

Roman Numerals	I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII
Modern Numbers	1	2	3	4	5	6	7	8	9	10	11	12

Below is an example of a G minor pentatonic scale with the hand position notated underneath the music staff. The “III” indicates that your hand should be in third position. When hand positions are notated, as they often will be in this book, you should keep your hand in that position until another hand position is notated.



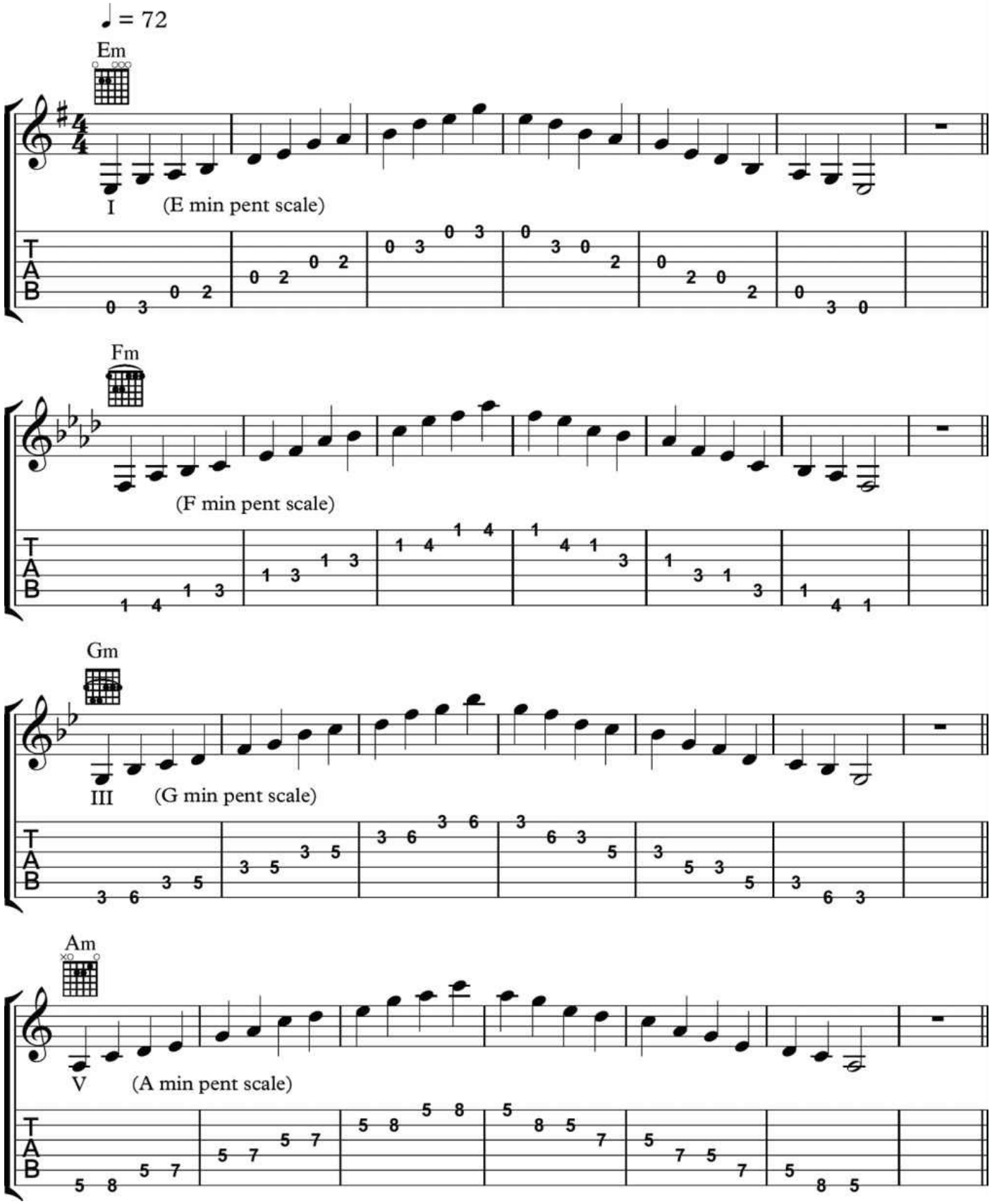
(1st finger plays fret 3)

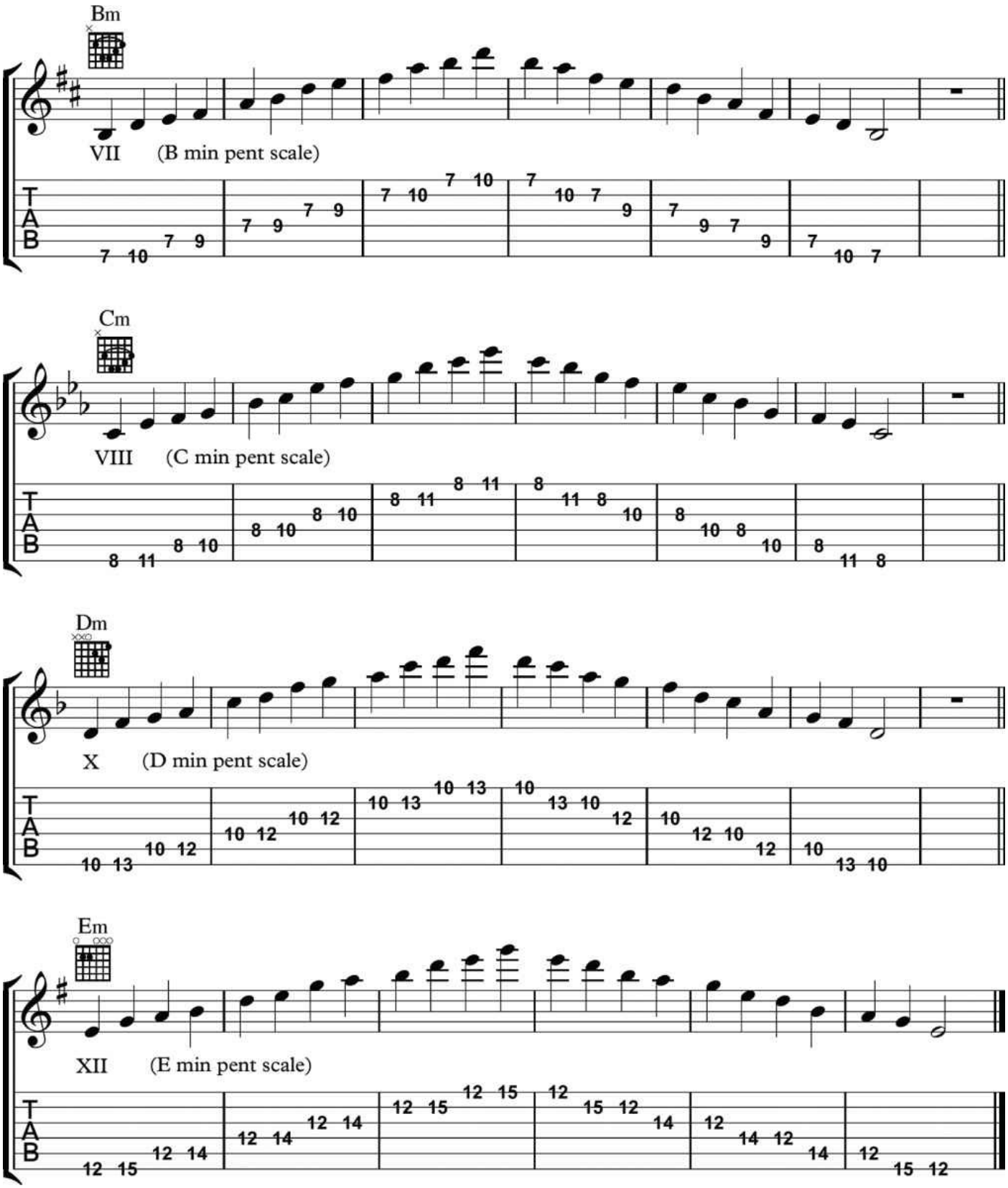
The next few pages contain exercises to help you get accustomed to playing the minor pentatonic scale up and down the neck of the guitar using Min Pent E1. Because each of these scales correlates to a minor chord, the chord names are written above the notes. Also, the most common chord shapes and fingerings are given as a reference. Use the measure of rest at the end of each line to prepare yourself for the next scale.

From this point forward, the exercises and examples may include scales that reach up to the 15th fret. This may be difficult at first for some players using acoustic guitars, but try to accommodate this range of notes, even if it takes a bit of extra practice.

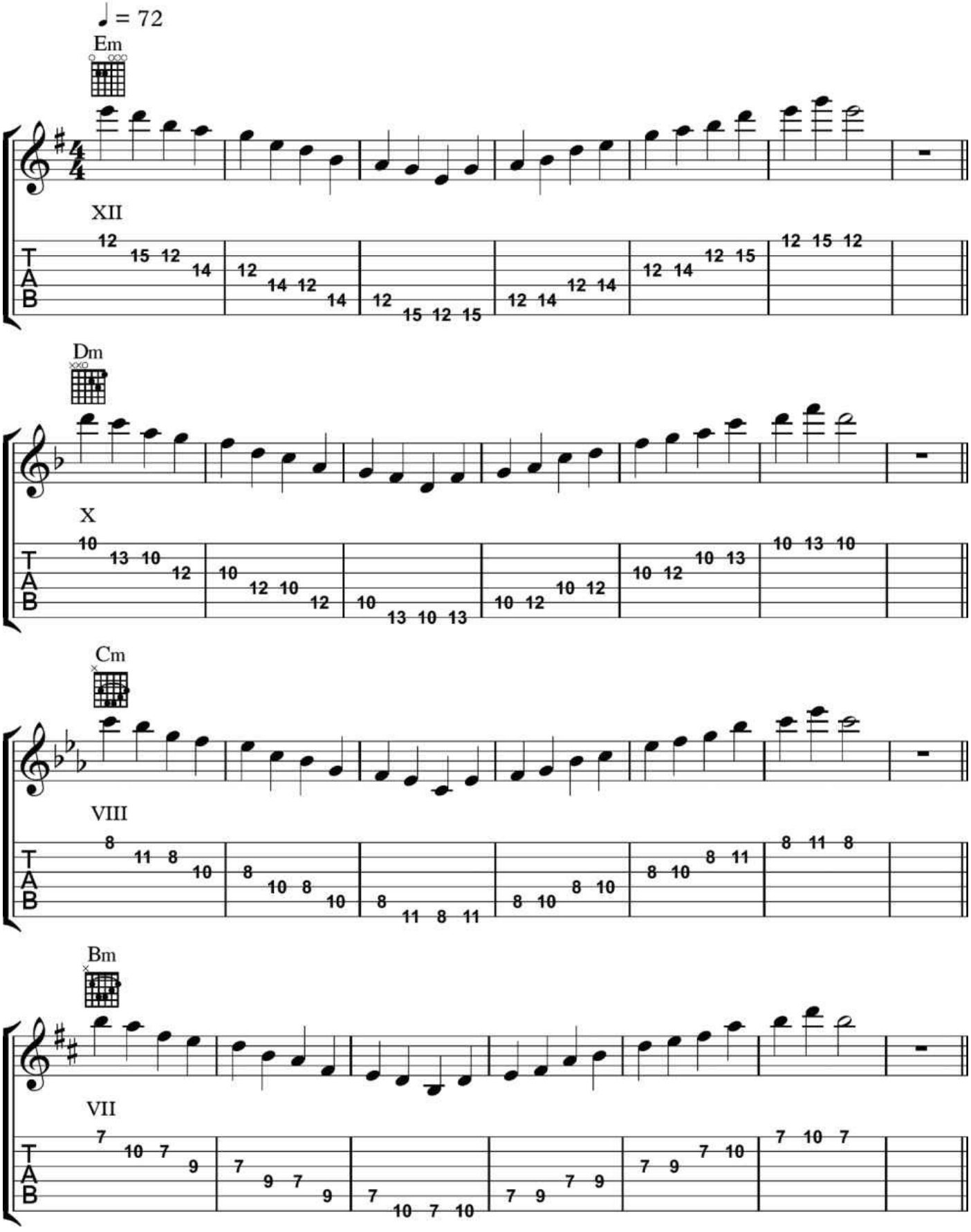
Nearly every exercise will contain chord names above the notes. It is very important to be able to hear each chord while you are playing so that you can gain an understanding of how the different notes of the scale will sound against the chord. This will become a key factor in choosing which notes to play when you are improvising. You may record yourself playing the chords at the notated tempo, or use computer software that will generate customized backing tracks.

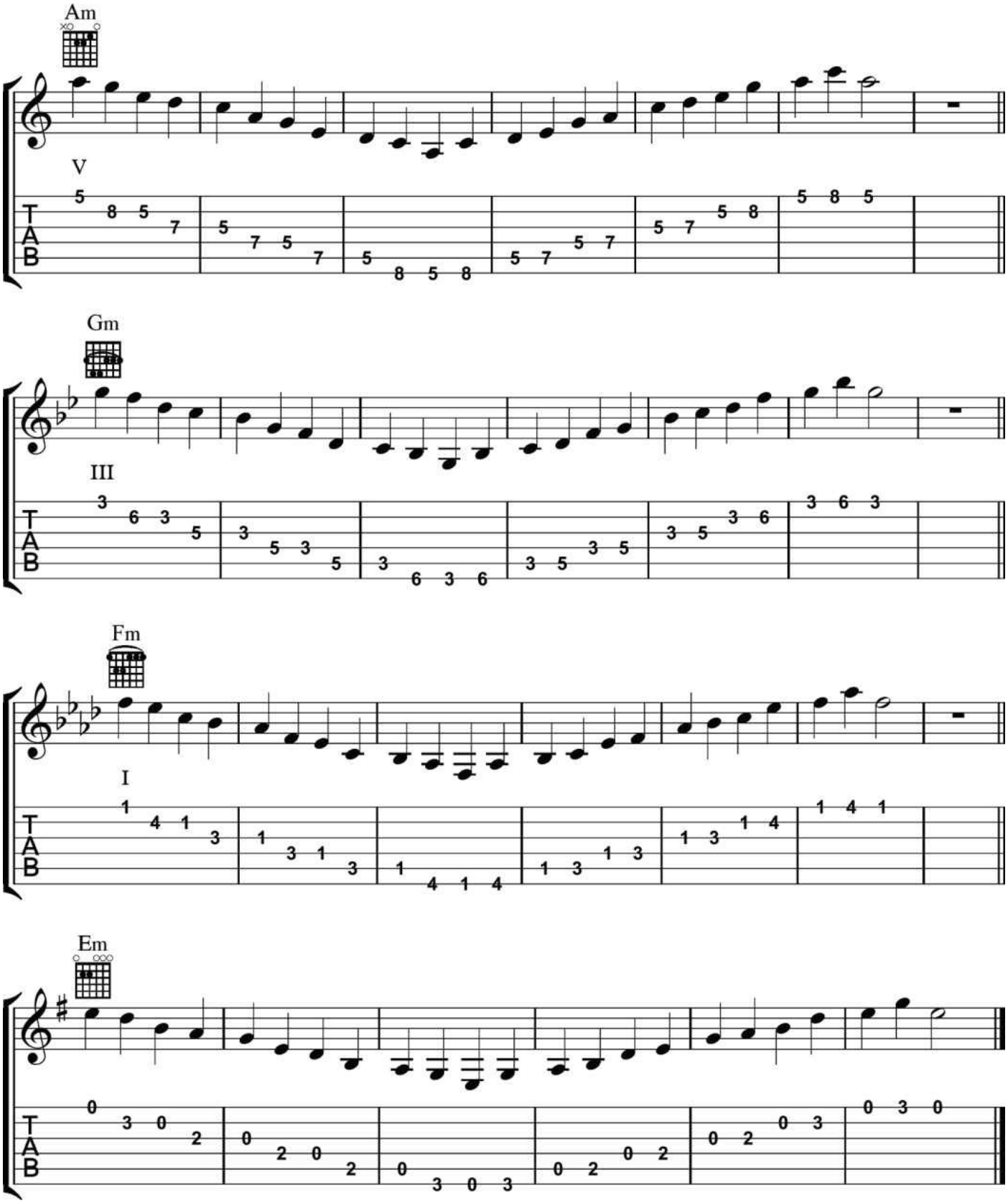
Moving Min Pent E1, Exercise 1




Bm
VII (B min pent scale)
Cm
VIII (C min pent scale)
Dm
X (D min pent scale)
Em
XII (E min pent scale)

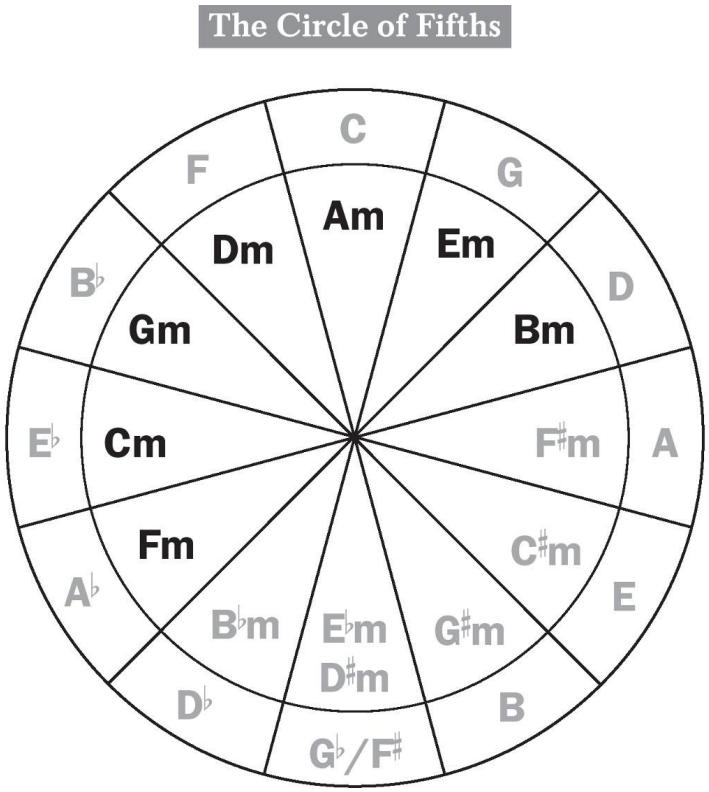
Moving Min Pent E1, Exercise 2





The ***circle of fifths*** is a very common diagram used by musicians. It contains all possible major and minor keys and is organized in such a way that keys that have similar notes are close to one another, while those that have very different notes are further apart. Since each scale is based upon a particular key (the A minor pentatonic scale for the key of A minor), the pentatonic scales that have similar notes are also located close to one another. For example, the B minor and E minor pentatonic scales have many similar notes, while the B minor and F minor pentatonic scales have no similar notes. The minor keys are located on the inside of the circle and are all accompanied by “m,” to indicate minor.

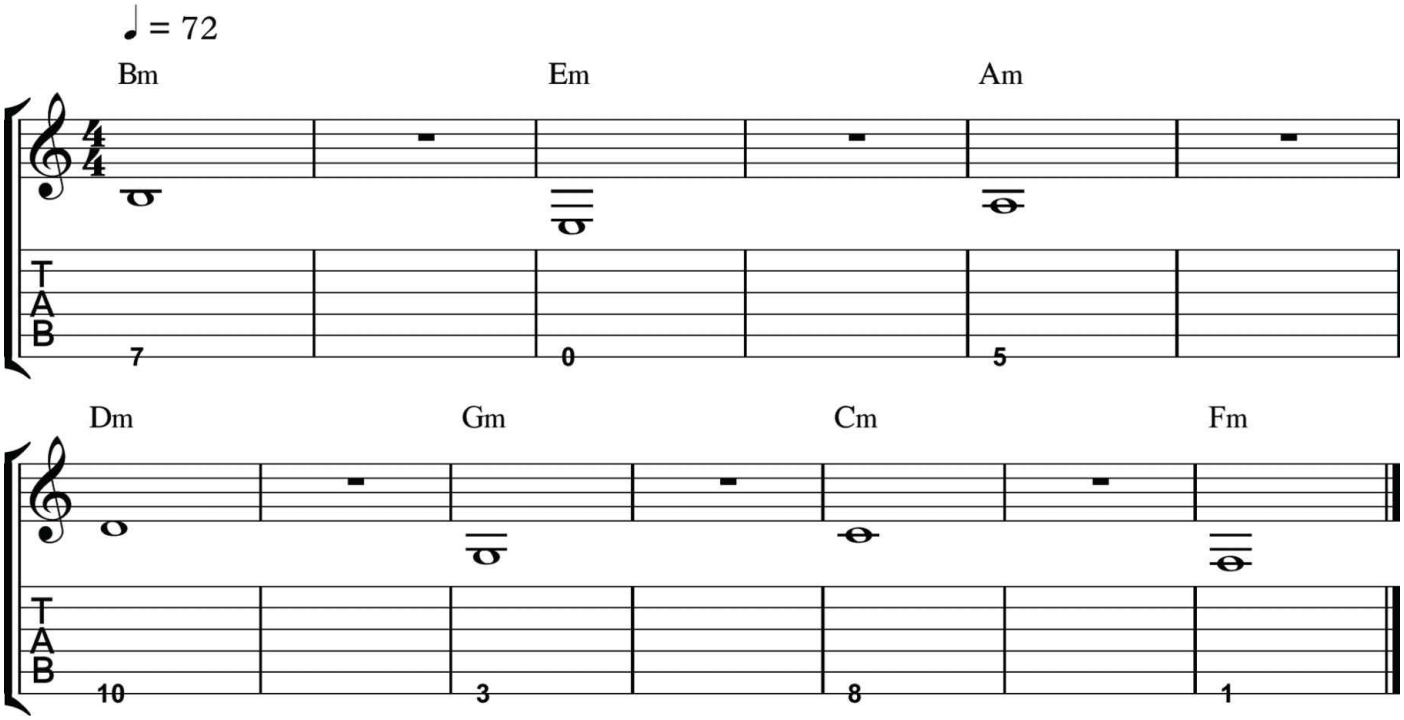
Only the minor keys that have been explained thus far are clearly notated in the circle, while the remaining minor keys and all major keys are faded. These keys will be explained later.



The circle of fifths is an excellent tool for scale practicing because the scales will not move in a simple sequential order around the circle (E, F, G, etc). Instead, the scales jump back and forth from one position to another. Practicing these jumps will aid in your understanding of the placement of these scales across the neck.

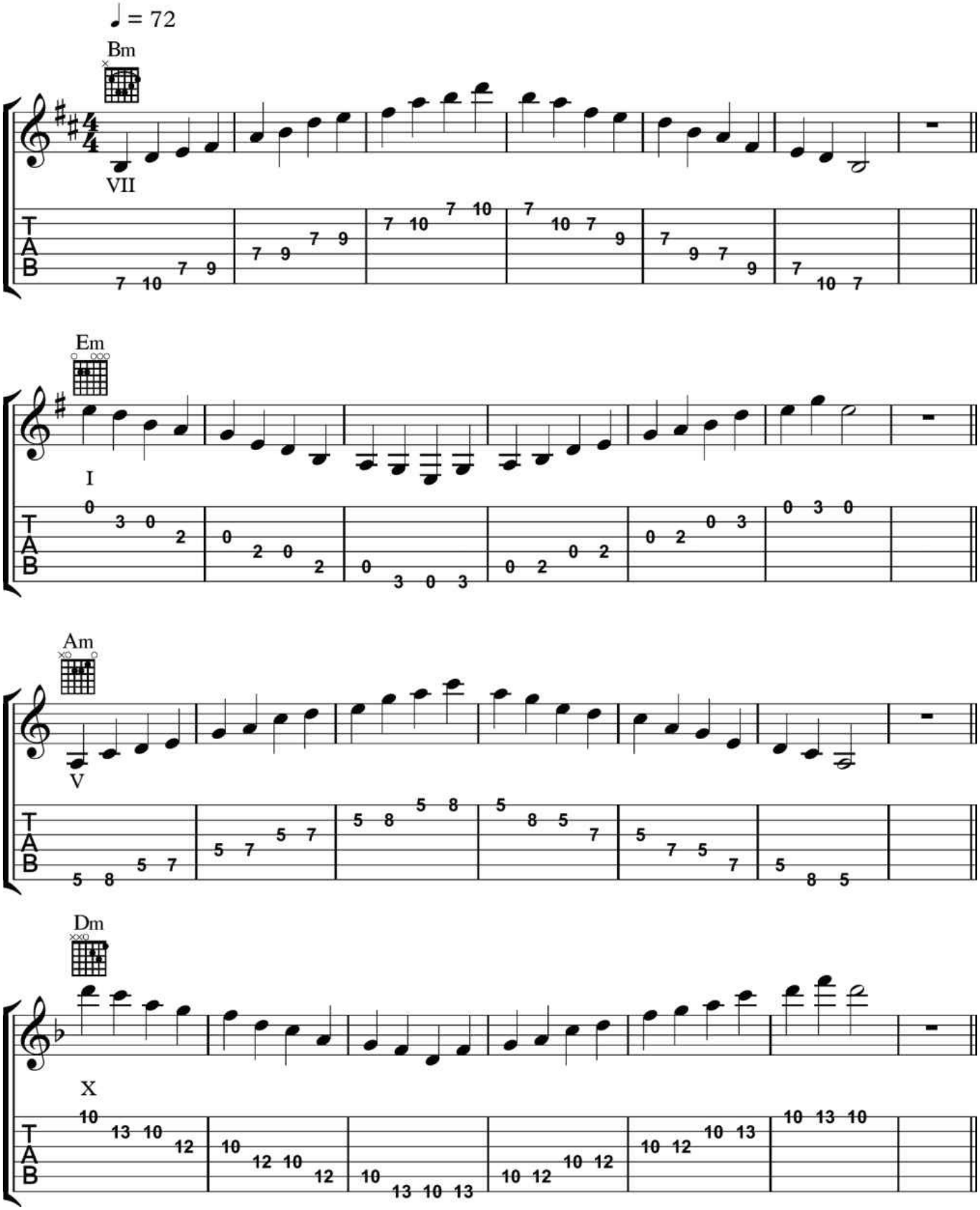
The following exercise will help you move the roots of the minor pentatonic scale half-way around the circle of fifths, starting at B minor and moving counter-clockwise. Be sure to play each of these notes with your 1st finger, as this is the finger that plays the root of Min Pent E1 (the one exception is the note E, which is an open string).

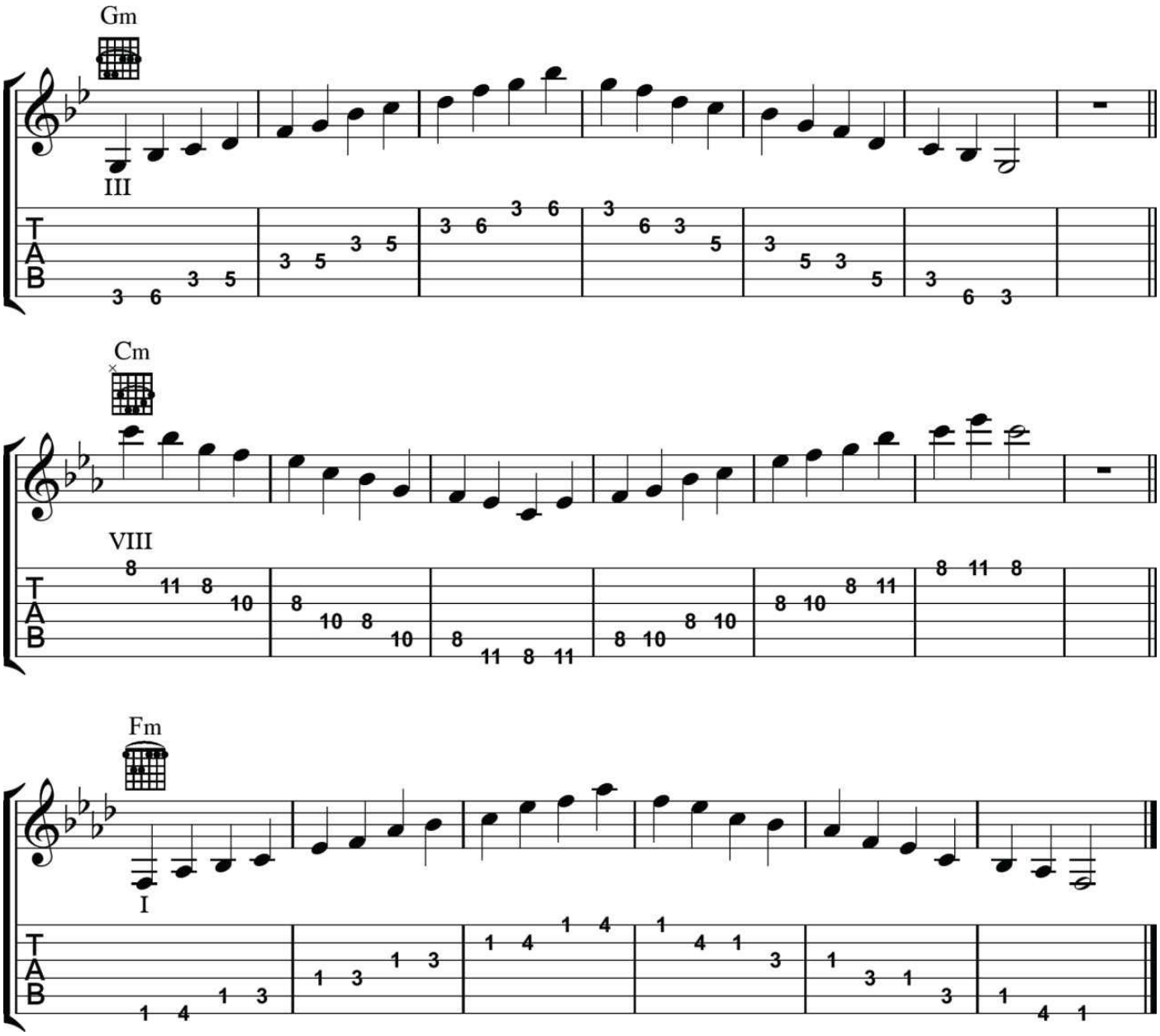
Moving the Min Pent Roots



Now that you have successfully moved the roots around the circle of fifths, the following exercise will show you how to play Min Pent E1 counter-clockwise around the circle of fifths, starting at B minor and ending at F minor. Also, the exercise will alternate between the scales starting on a low root and starting on a high root.

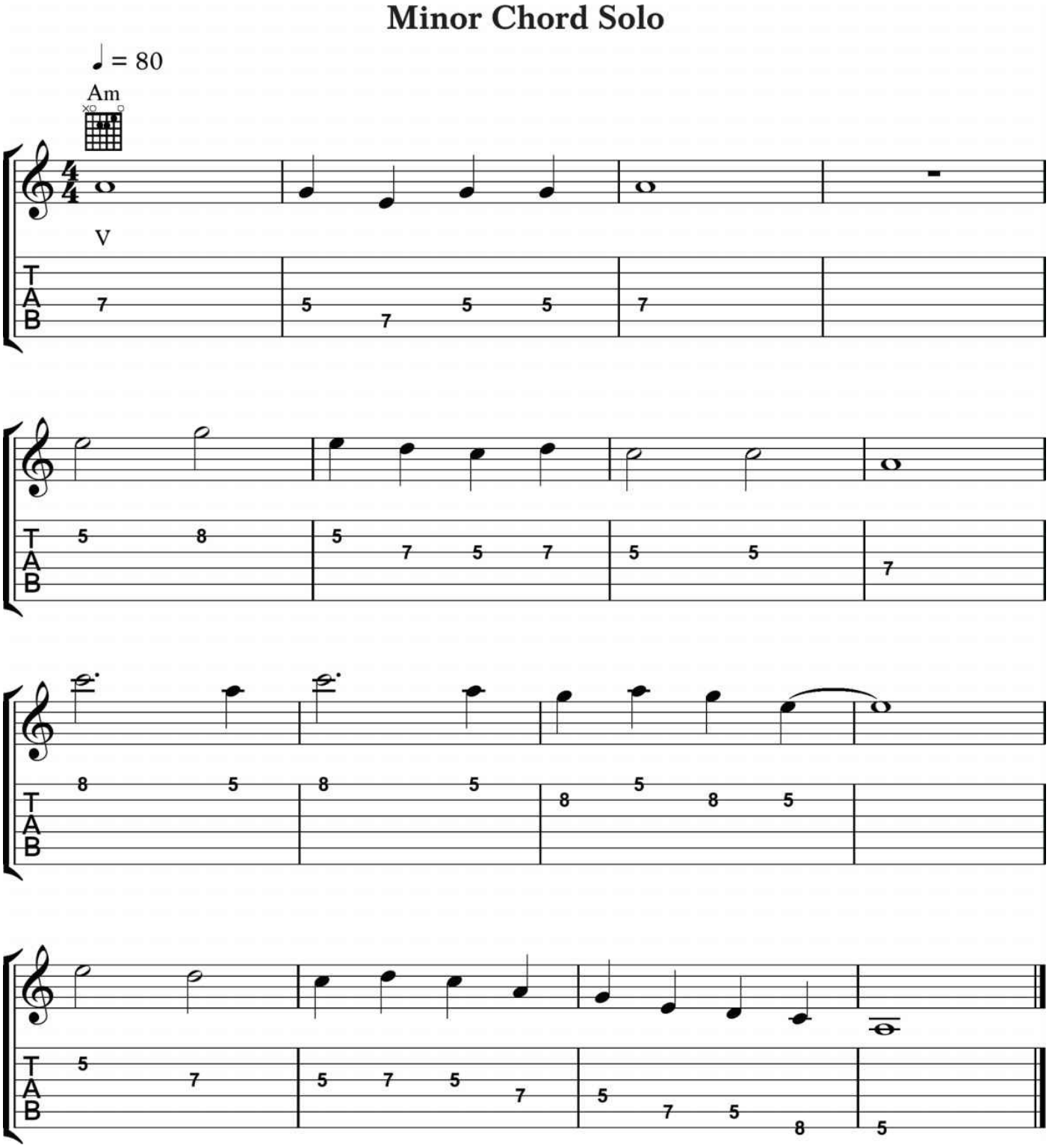
Moving Min Pent E1, Exercise 3




Gm
III
Cm
VIII
Fm
I

Part 5: Improvising Over a Minor Chord

Below is an excellent example of how to combine all that has been learned so far into a melodic guitar solo over a minor chord. Min Pent E1 is used in 5th position to fit the chord Am, creating an A minor pentatonic scale. The solo incorporates quarter, half, dotted-half, and whole notes, and commonly has the roots of the scale as the longest notes. Also, the scale stays in sequence (and does not skip over any notes) unless there is a rest or a long note.

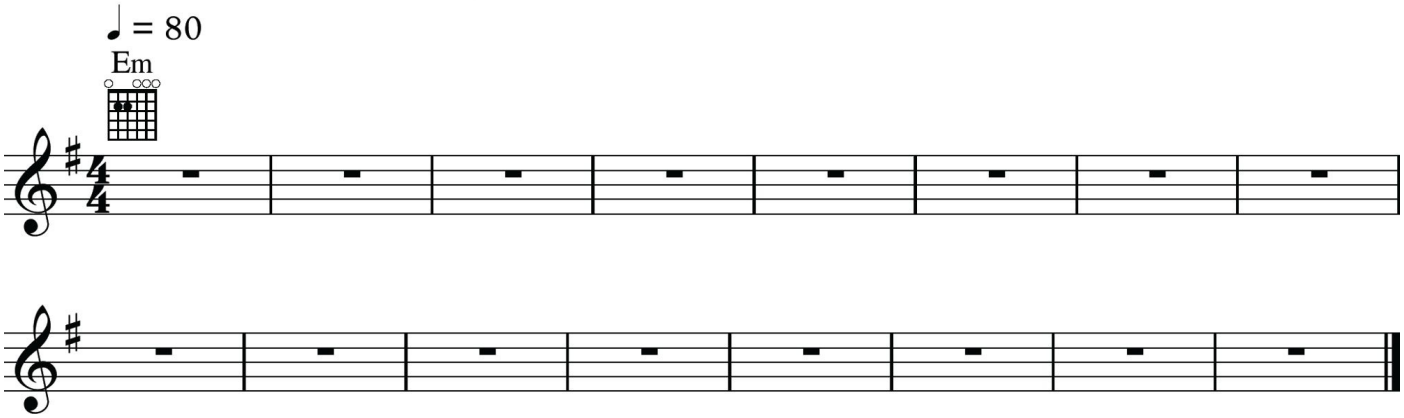


Now try improvising your own guitar solos over these exercises. Try to incorporate the same concepts used in the Minor Chord Solo:

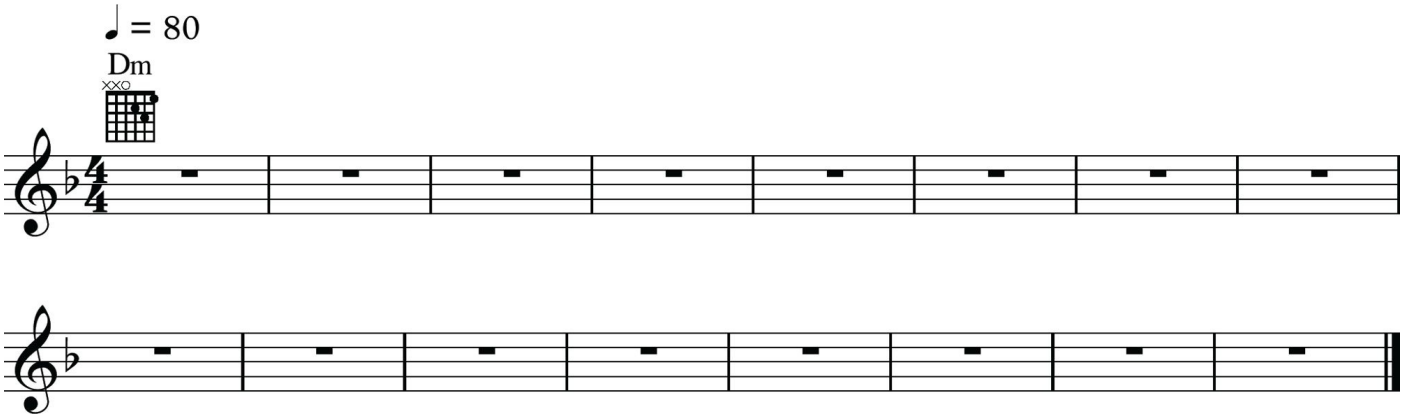
- Use Min Pent E1 with the correct hand position and fingering.
- Use interesting combinations of quarter, half, dotted-half and whole notes.
- Use the roots of the scale as some of the longest notes.
- Keep the scale in sequence unless there is a long note or a rest.

Remember that “improvising” means that you are composing a solo at the moment you are playing it. Therefore, there will be no TAB or hand positions provided in these sections.

Improvising Over a Minor Chord, Exercise 1



Improvising Over a Minor Chord, Exercise 2



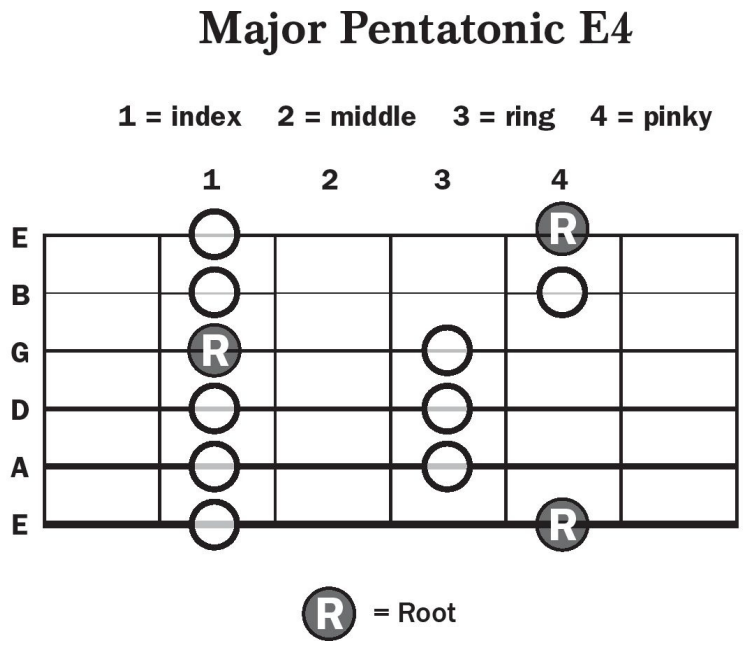
Chapter 3

The Major Pentatonic Scale Shape E4

Because most songs have a complimentary mixture of major and minor chords, it is important to have the ability to improvise over both. This chapter focuses on a major pentatonic scale shape, its relation to the minor pentatonic scale, and how to improvise over a major chord.

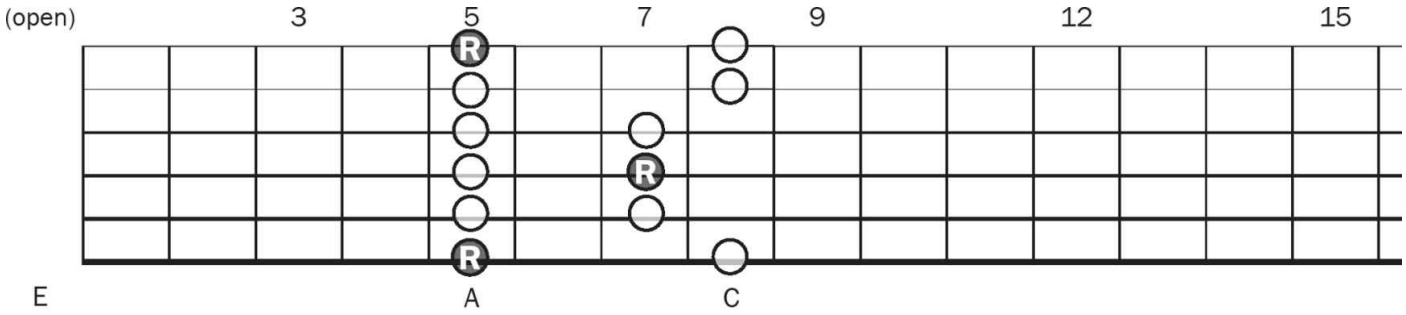
Part 1: The Major Pentatonic Scale Shape E4

The major pentatonic scale can be used for improvisation over all major chords and some of their variations, including major 6th chords (maj6), major 7th chords (maj7) and dominant 7th chords (such as E7 or A7). Like the minor pentatonic scale, the notes of this scale will fit very well with their relative chords, producing very little dissonance and acting as a quality arrangement of notes for improvising. Below is one of the most commonly used major pentatonic scale shapes, which spans across four frets. It is called **Major Pentatonic Scale Shape E4** ("E" because the lowest root is on the E-string and "4" because that root is played with the 4th finger), and may be abbreviated as "Maj Pent E4." The appropriate finger numbers for the scale are written above the frets. The scale uses fingers 1, 3, and 4.



You may have noticed that although the roots have changed, the finger pattern for the Major Pentatonic Scale Shape E4 is exactly the same as the Minor Pentatonic Scale Shape E1. This is one of the odd facts to be learned about major and minor pentatonic scales — every minor pentatonic scale is also a major pentatonic scale (and every major pentatonic a minor pentatonic). The root will change, but the notes will all remain the same.

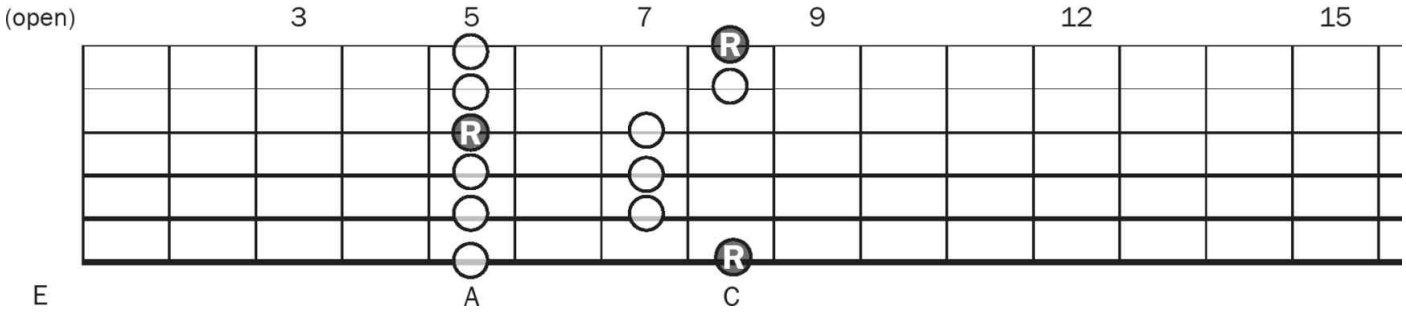
The way to describe this phenomenon of music is to say that the minor and major scales that have the same notes but different roots are ***relative*** to one another. The distance between the roots of these relative scales is three frets. The diagram below shows both the A minor pentatonic and C major pentatonic scale shapes, and further explains how they are relative to one another.



(A Minor Pentatonic scale)

Move the root up by three frets* and keep the same scale shape...

(C Major Pentatonic scale)



**Although the root in the middle of the scale has moved to a new string, it is equivalent to 3 frets.*

The A minor pentatonic scale is the ***relative minor*** of the C major pentatonic scale. To find the root of the relative minor pentatonic scale, move the root down by 3 frets (or move to the next lowest scale tone).

The C major pentatonic scale is the ***relative major*** of the A minor pentatonic scale. To find the root of the relative major pentatonic scale, move the root up by 3 frets (or move to the next highest scale tone).

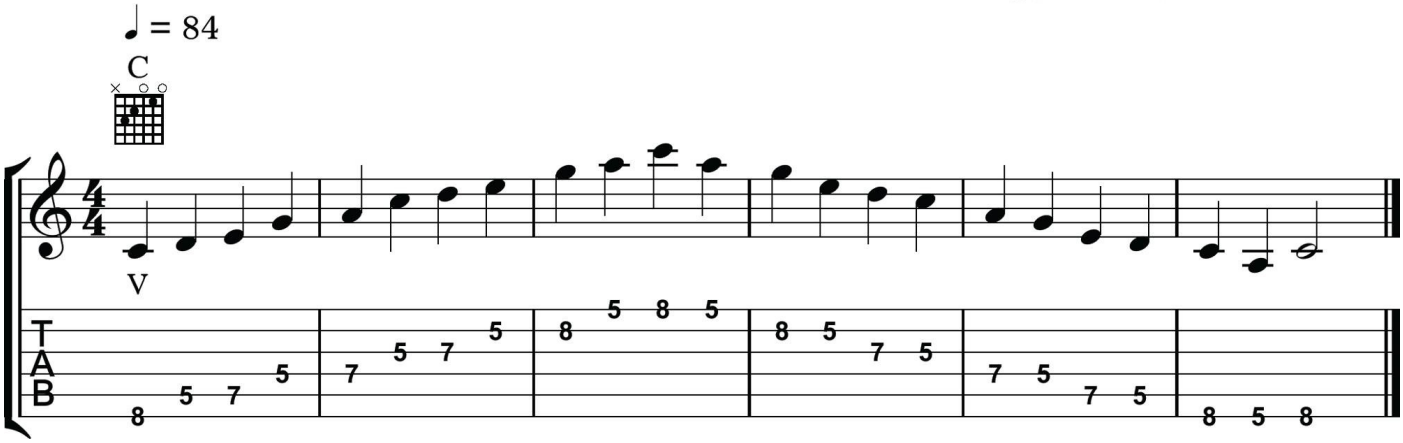
This concept may be confusing at first, but the exercises in Part 2 of this chapter will help you to further understand this major and minor pentatonic relationship.

Part 2: Maj Pent E4 Exercises

The following scale exercises will get you comfortable with playing the Major Pentatonic Scale Shape E4. All scales will begin and end on a root, and will only be based on the natural notes of the E-strings that have already been explained. Be sure to learn each exercise at its notated tempo before going to the next section.

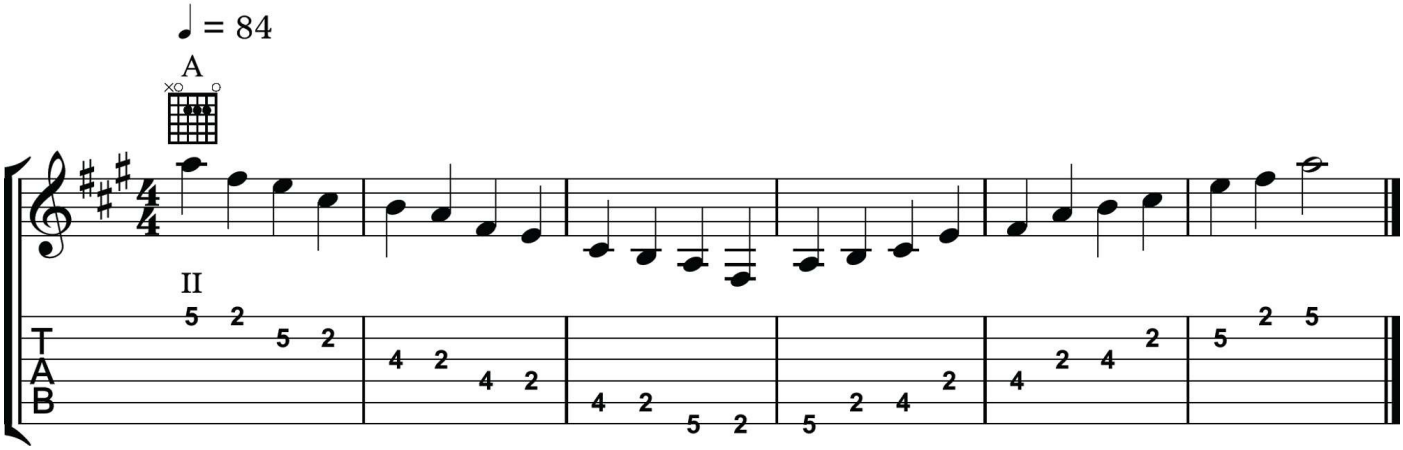
Playing Maj Pent E4, Exercise 1 (in C)

The low root of this scale is located on the 8th fret of the 6th string (the note C).



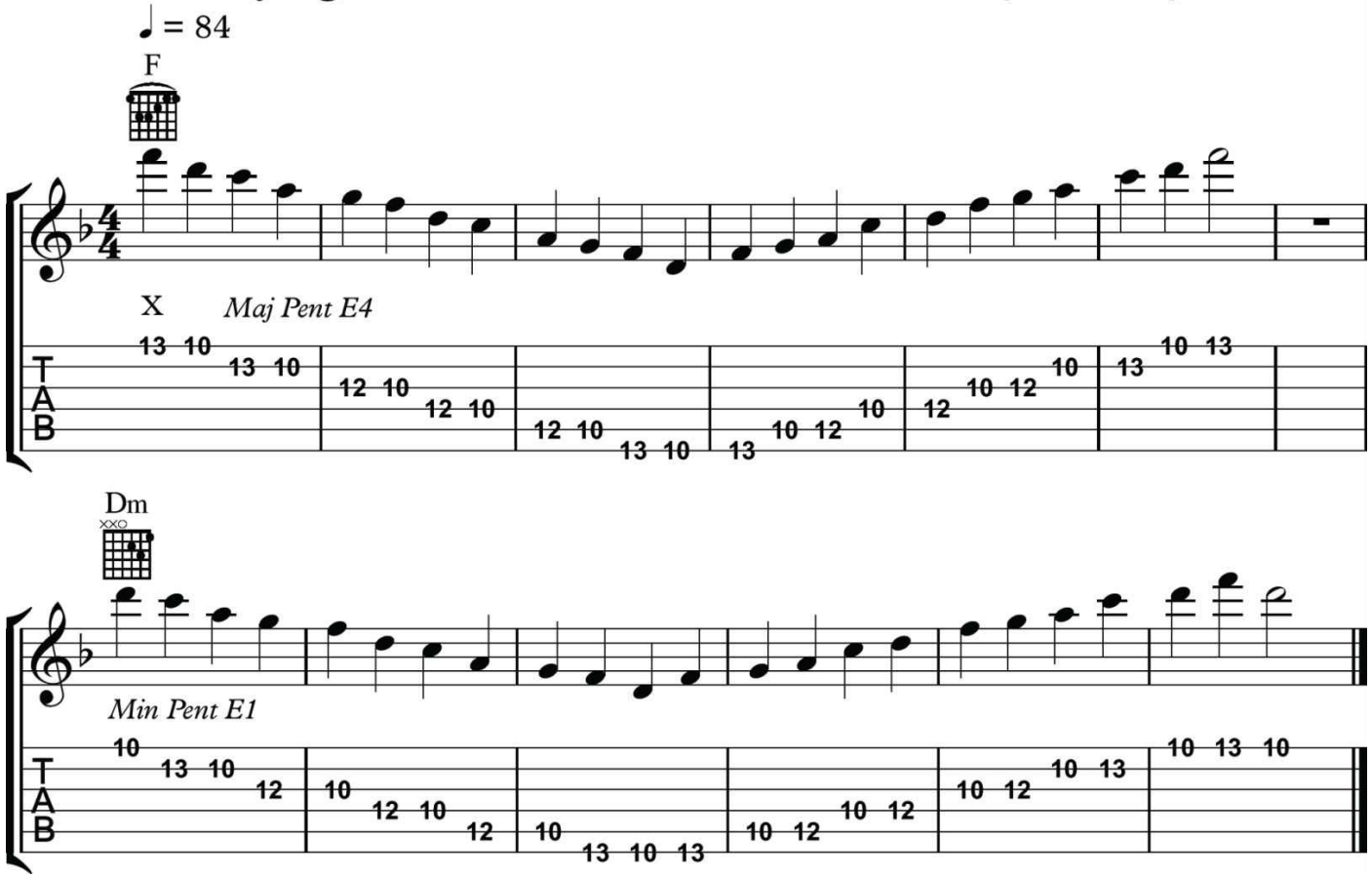
Playing Maj Pent E4, Exercise 2 (in A)

The high root of this scale is located on the 5th fret of the 1st string (the note A)



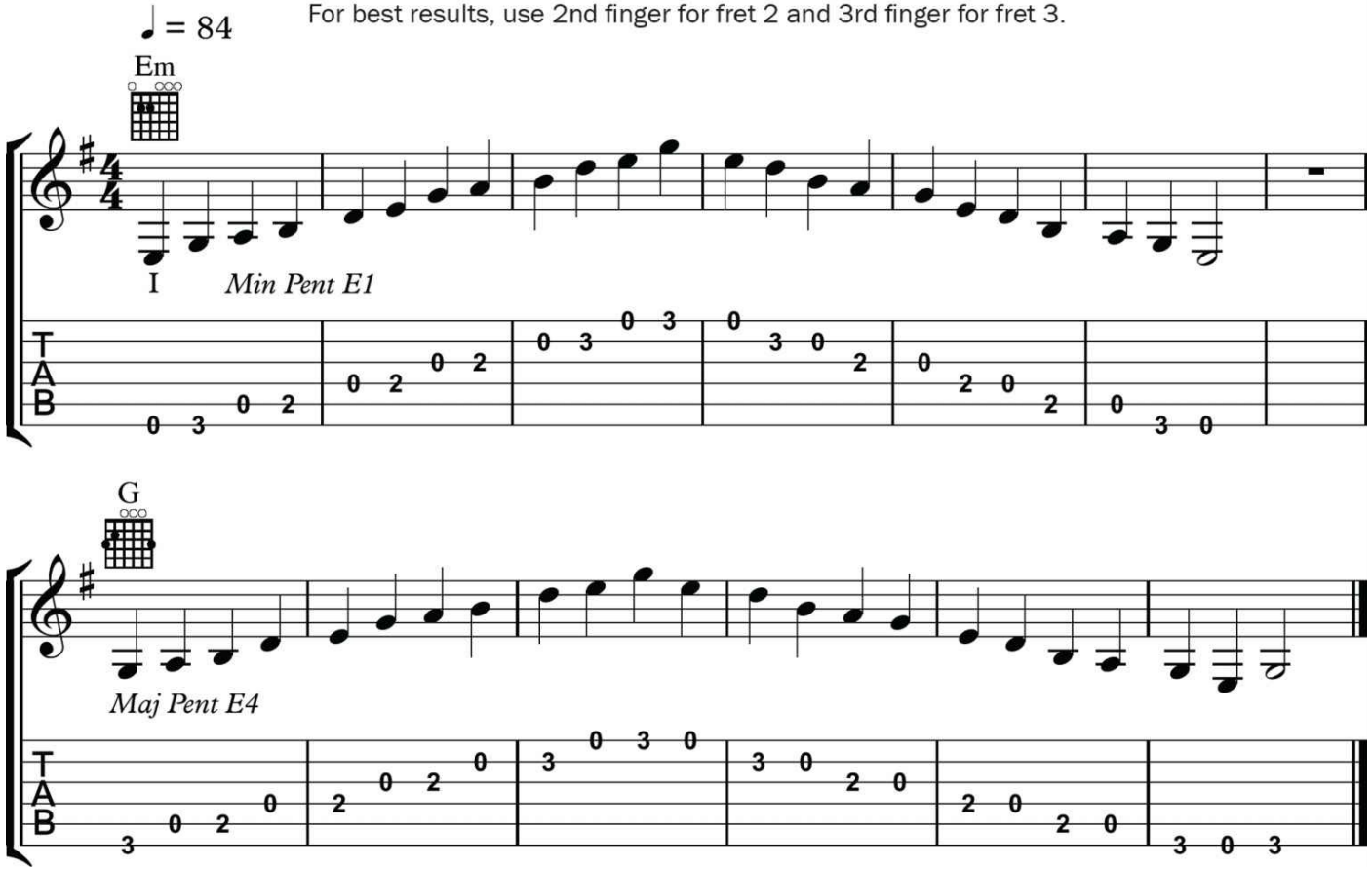
The following scale exercises will get you comfortable with the relative major and minor pentatonic scale shapes. Each example contains Maj Pent E4 and Min Pent E1 in the same position on the guitar neck. All scales will begin and end on the appropriate high or low root for each scale, and will only be based on the natural notes of the E-strings that have already been explained.

Playing Relative Pent Scales, Exercise 1 (F & Dm)



Playing Relative Pent Scales, Exercise 2 (Em & G)

For best results, use 2nd finger for fret 2 and 3rd finger for fret 3.



Part 3: All Notes Across the E-Strings

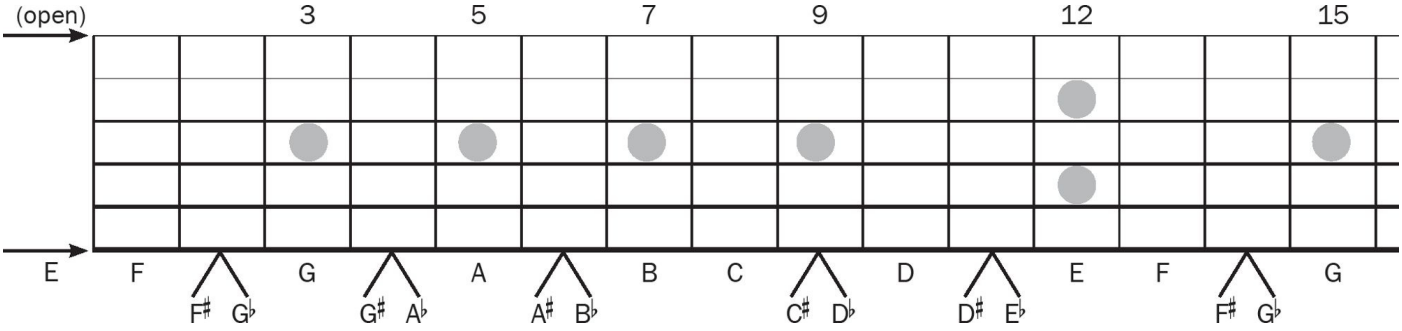
So far, you have learned the names and locations of all the natural notes across the E-strings. It is now time to learn the names of the notes that are located in between these natural notes. All of these notes have a letter followed by a sharp or flat.

A *sharp* symbol (♯) raises a note by one fret.

A *flat* symbol (♭) lowers a note by one fret.

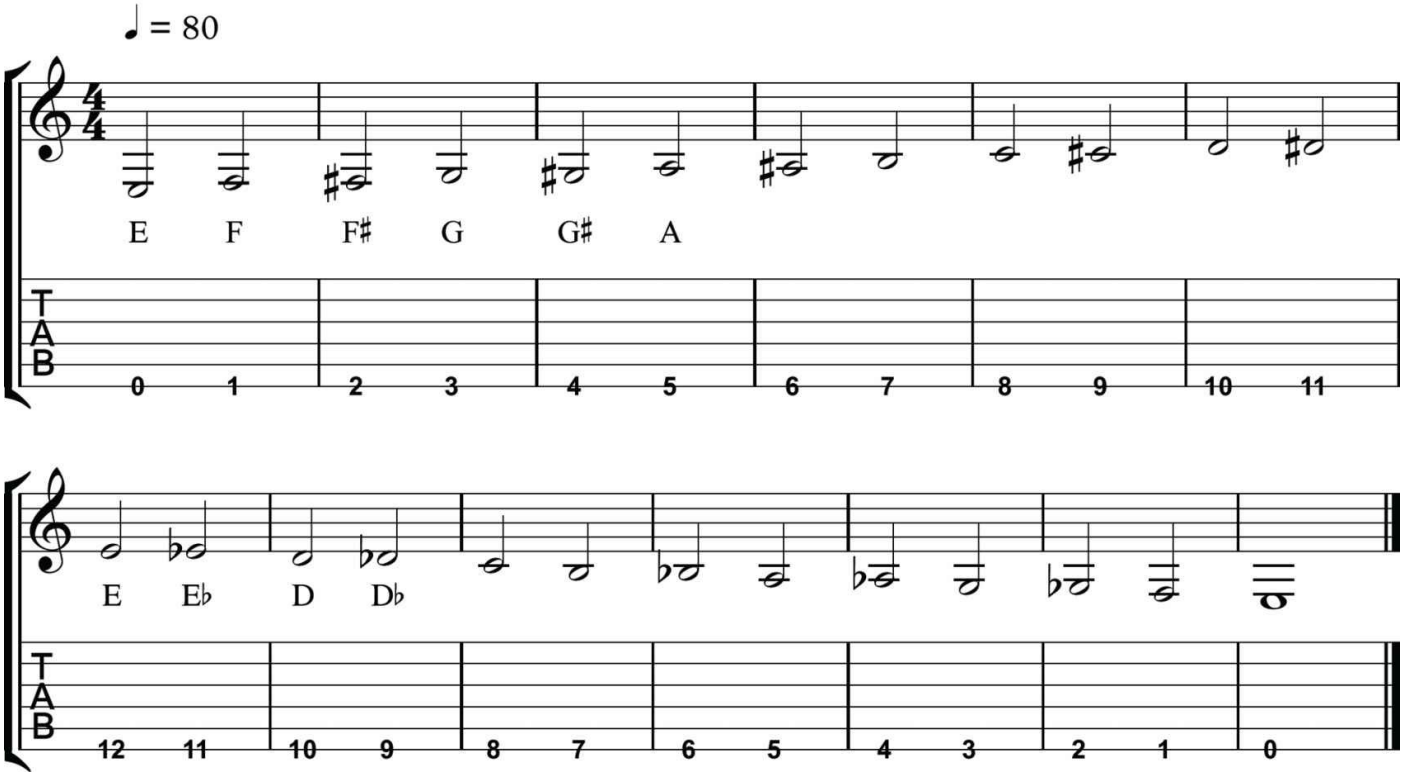
Because the previously unlabeled frets can either have a note that moves up to it (sharp) or a note that moves down to it (flat), each one is both a flat note and a sharp note. These notes that have the exact same sound but are called by different names are called ***enharmonic notes***. For example, the 2nd fret of the E-string can be called either F-sharp or G-flat.

The diagram below shows all of the possible notes across the E-string up to the 15th fret, including those that are flat and sharp. Again, the most common arrangement of fretboard dots is in the middle of the guitar neck and their relative fret numbers are written above.



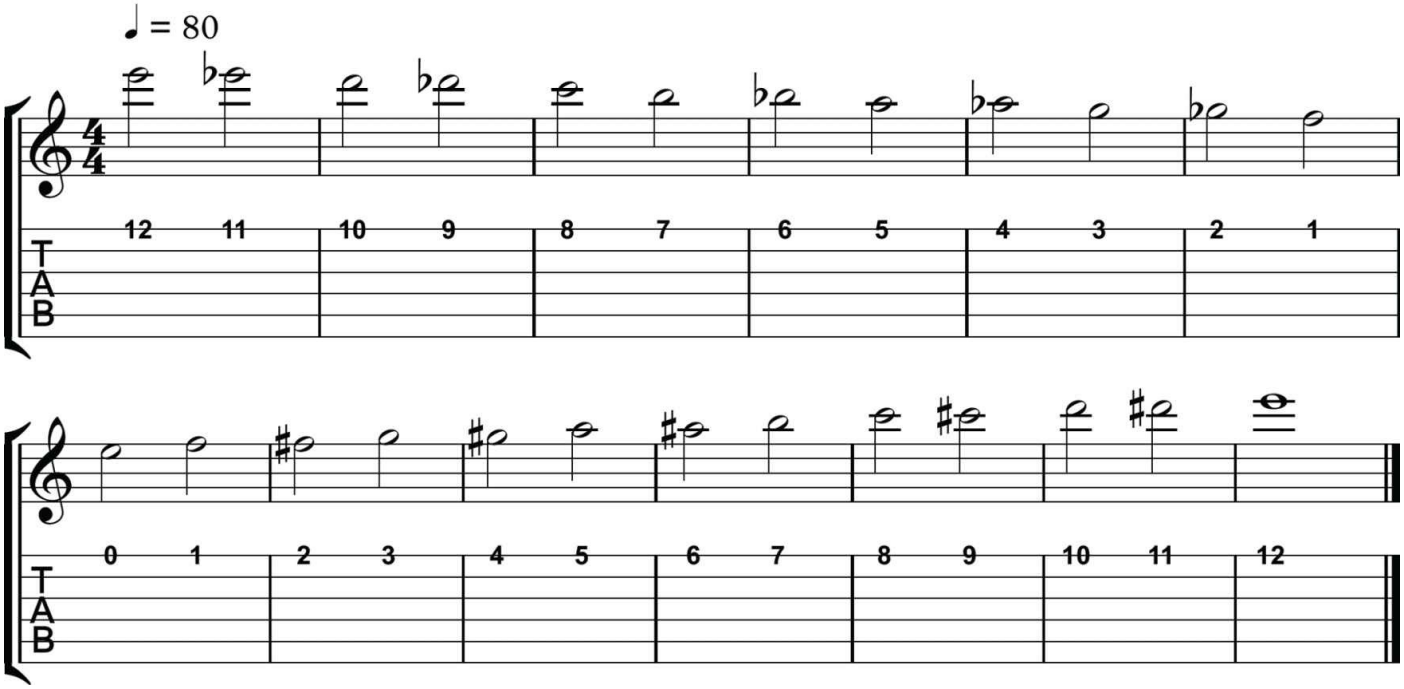
Use the following exercises to become comfortable with the entire note sequence of the E-strings. Say the note names aloud as you play to help associate the note names with their frets, using “sharp” names as the notes move higher and “flat” names as the notes move lower. Use only the index finger of your fretting hand to play these notes.

E-String Notes, Exercise 1



E-String Notes, Exercise 2

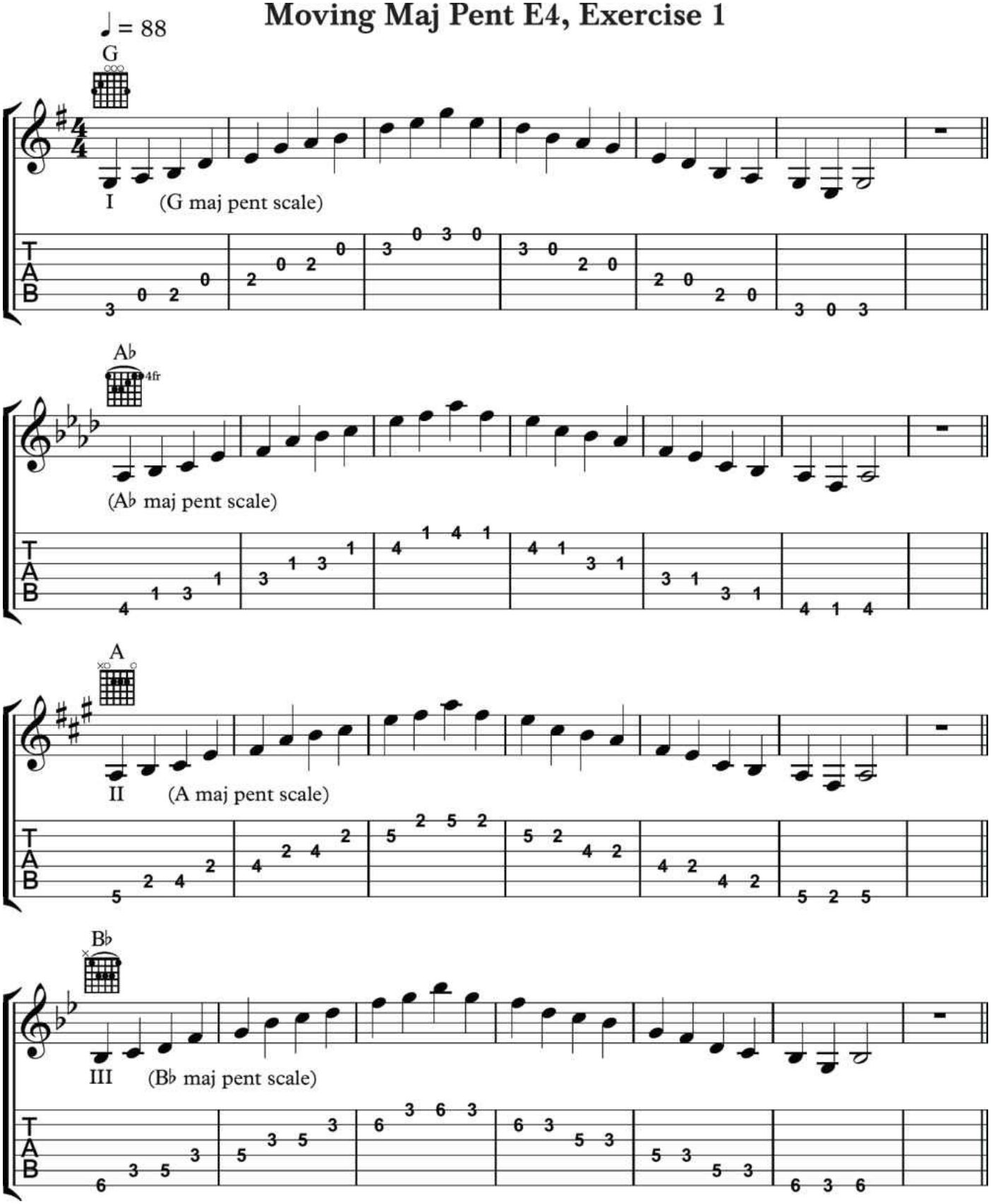
(Continue to say note names aloud)

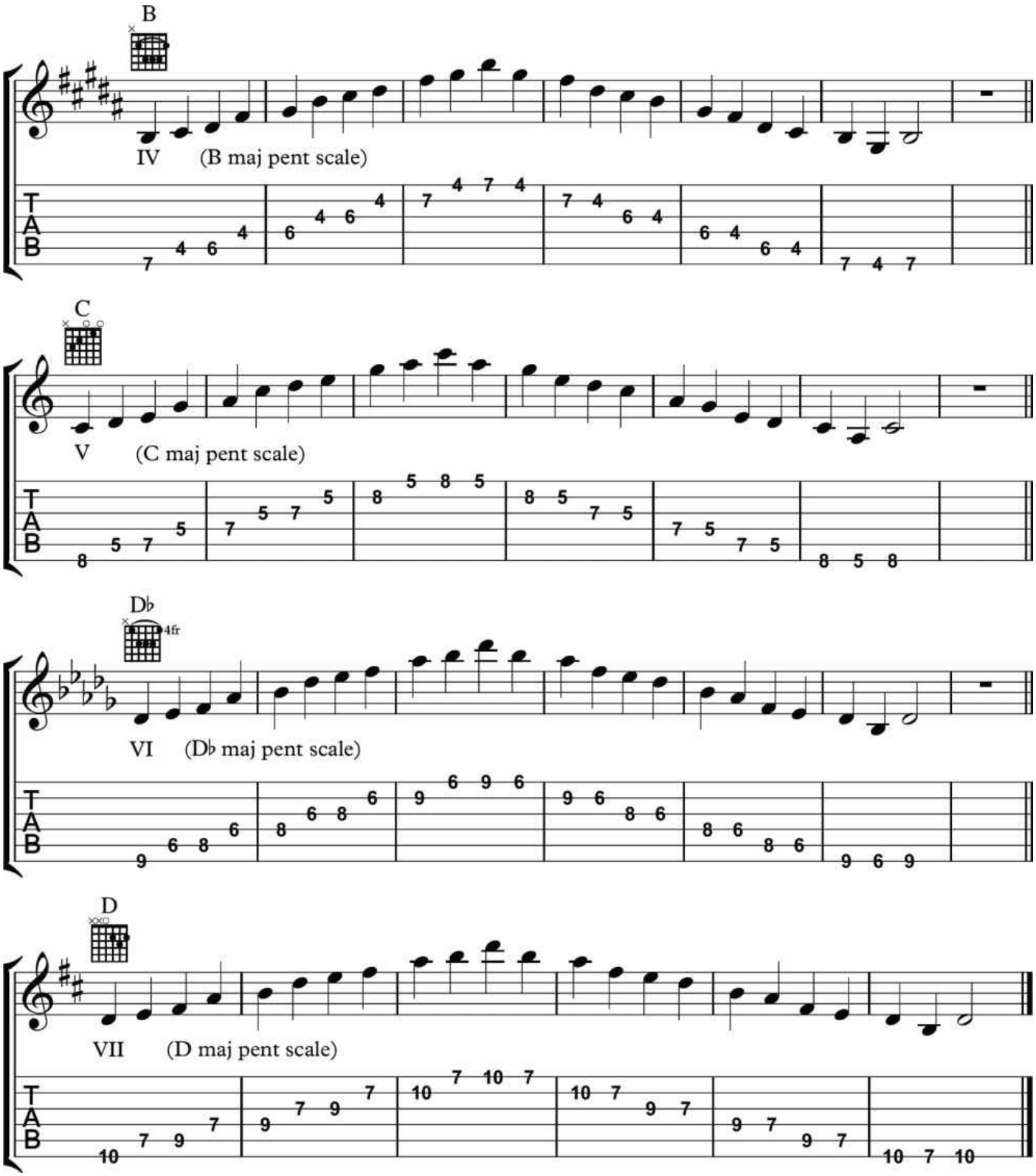


Part 4: Moving Maj Pent E4

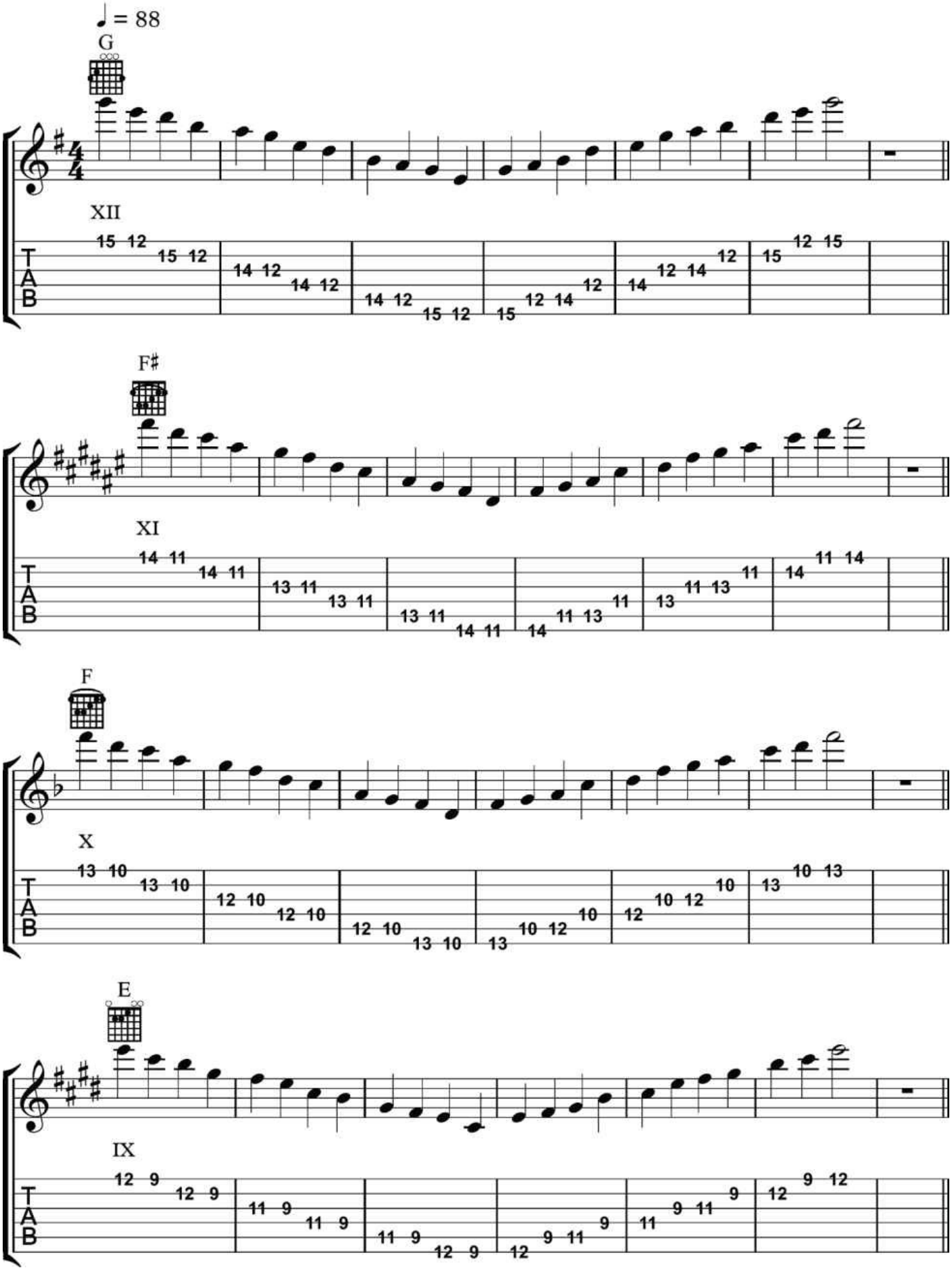
Now that you can play a major pentatonic scale shape and have a solid understanding of all notes across the E-strings, you have the ability to play 12 different major pentatonic scales. The next few exercises will help you get accustomed to playing the major pentatonic scale up and down the neck of the guitar. Because each of these scales correlates to a major chord, the chord names are written above the notes (the most commonly used name for the flat/sharp major chords has been used). Also, the most common chord shapes and fingerings are given as a reference. Use the measure of rest at the end of each line to prepare yourself for the next scale.

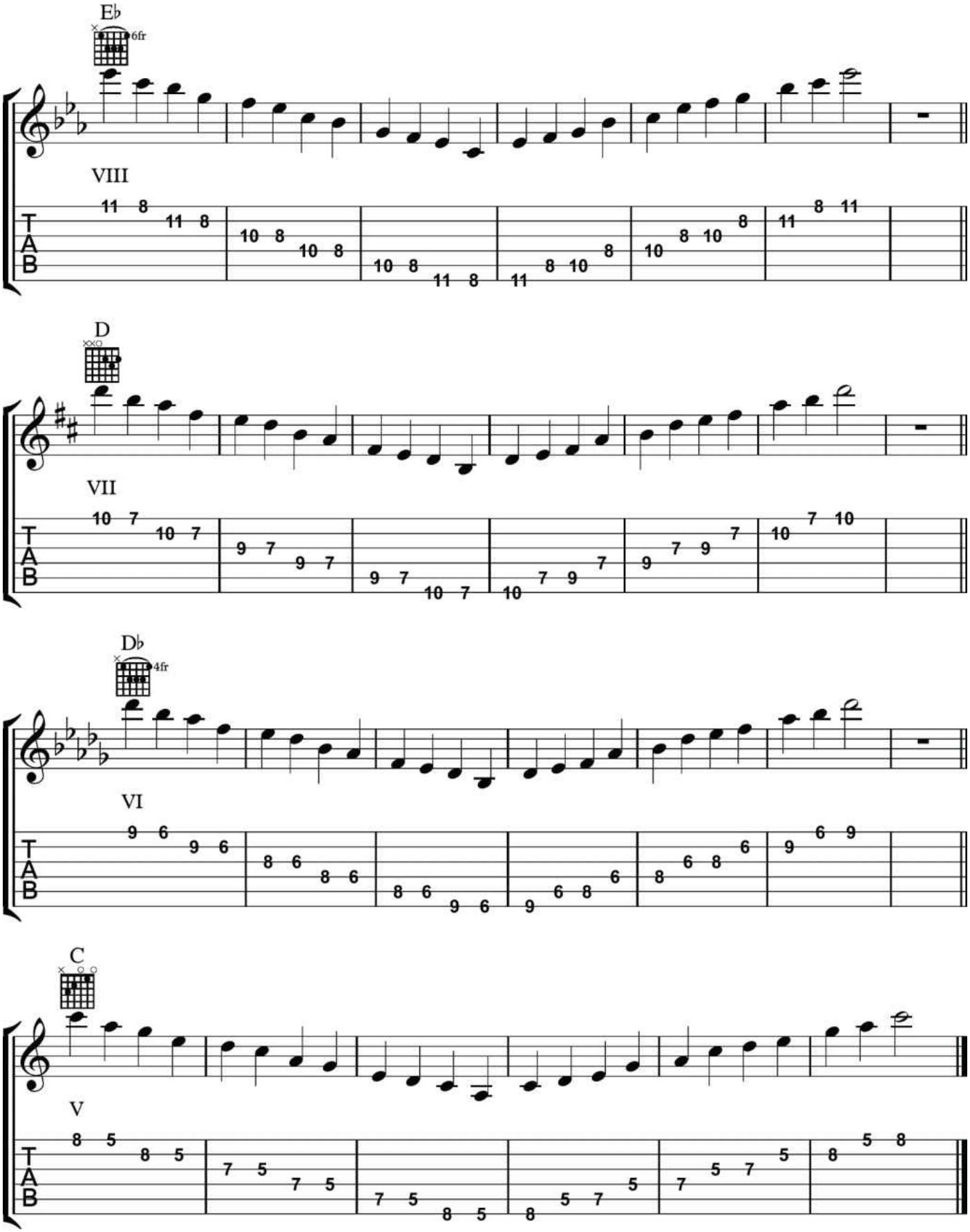
Moving Maj Pent E4, Exercise 1



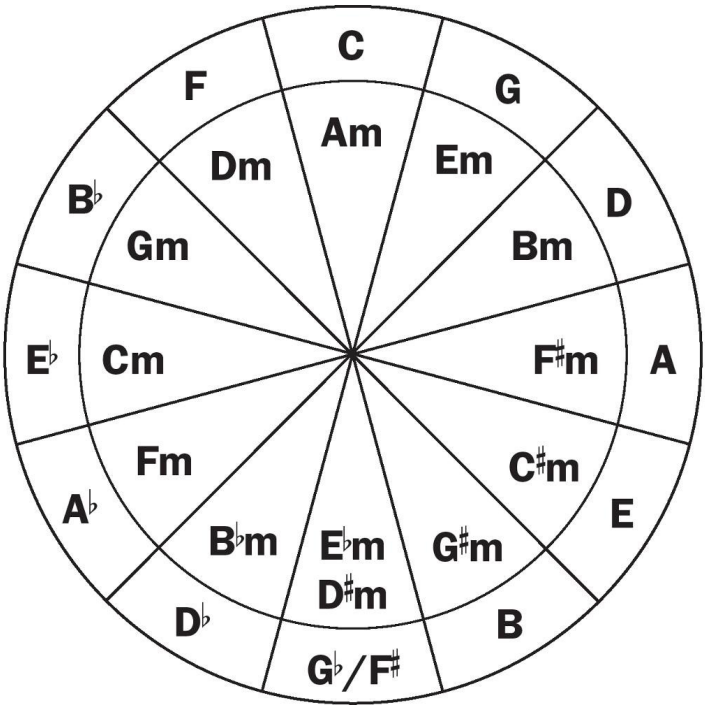

B
IV (B maj pent scale)
C
V (C maj pent scale)
D♭
4fr
VI (D♭ maj pent scale)
D
VII (D maj pent scale)

Moving Maj Pent E4, Exercise 2





The circle of fifths was partially explained in Chapter 2, but can now be completely understood. Below is the complete diagram of the circle of fifths which contains all major and minor keys, including those that are flat and sharp. The major keys are listed on the outside while the minor keys are listed on the inside and are accompanied by “m.”

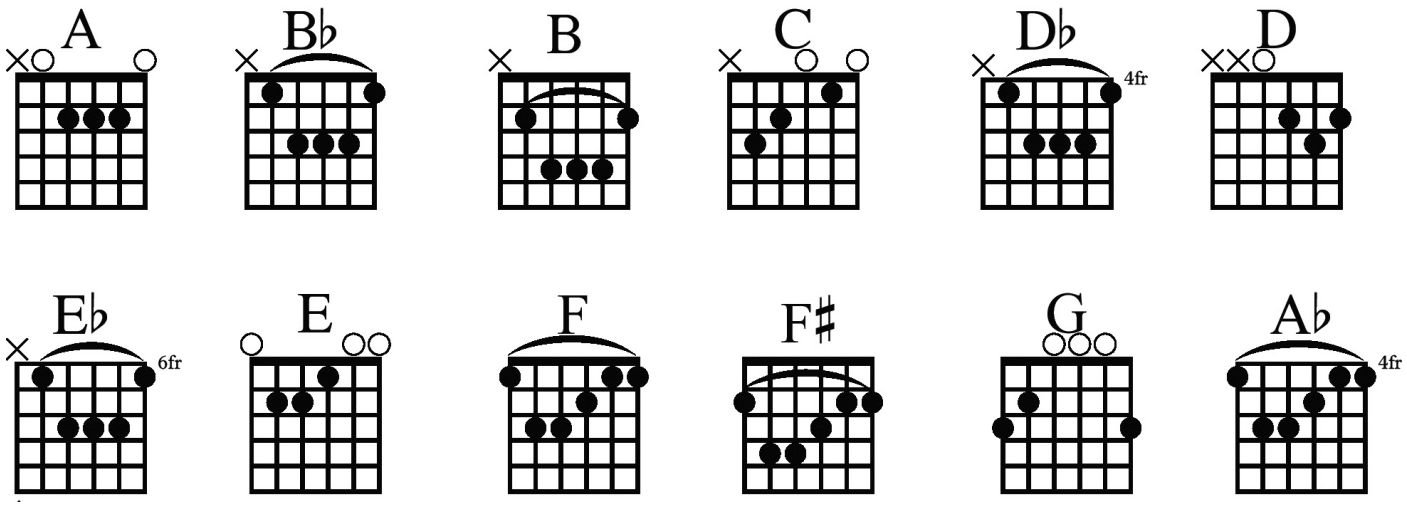


The complete circle of fifths also shows which major and minor keys (and pentatonic scales) are relative to each other by grouping them in the same sector. Here's two examples that will help to explain this concept:

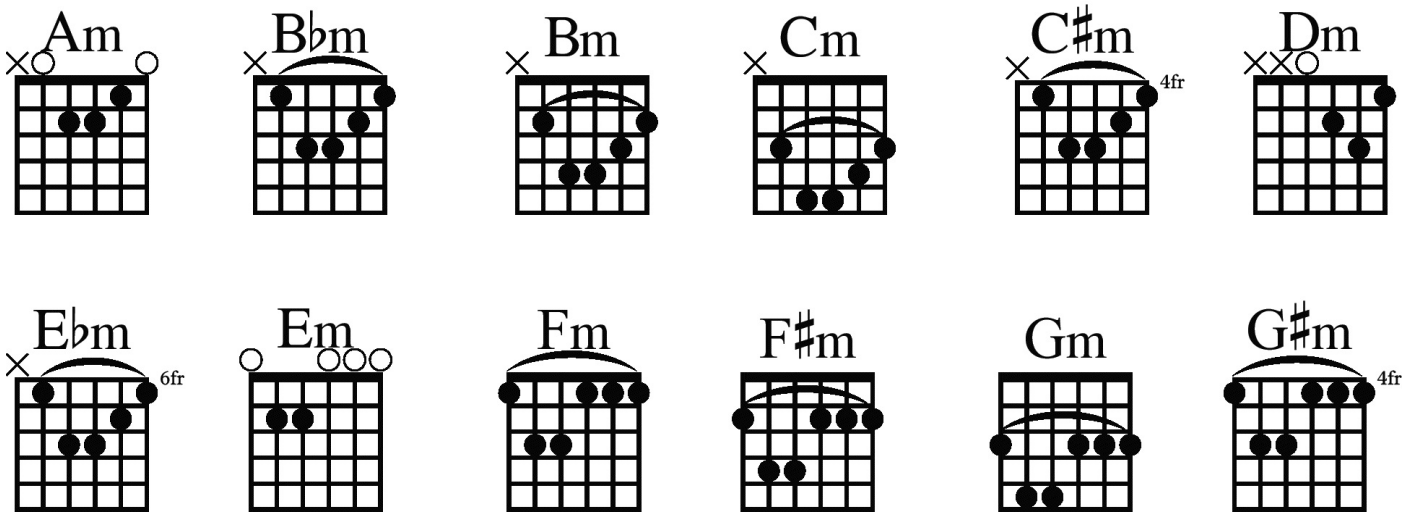
1. The C major pentatonic scale is played in fifth position (V) on the guitar (using Maj Pent E4) and has a root note C. The A minor pentatonic scale is also played in fifth position (using Min Pent E1) and uses the same notes as the C major pentatonic scale, but has a different root — A. Because these major and minor pentatonic scales are relative to each other, they are located within the same sector of the circle of fifths.
2. The B minor pentatonic scale is played in seventh position (VII) on the guitar (using Min Pent E1) and has a root note B. D major is located in the same sector of the circle of fifths, which makes D major the relative major of B minor. The D major pentatonic scale is also played in seventh position on the guitar (using Maj Pent E4) and uses the same notes as the B minor pentatonic scale, but has a different root - D.

Below are fingering diagrams for all major and minor chords. Although there are numerous fingerings and positions that may be used to play each of these chords, the chord diagrams listed below are the most common. Exercises and solos from this point forward will not contain chord diagrams, and this page should be used instead as a reference.

Major Chords

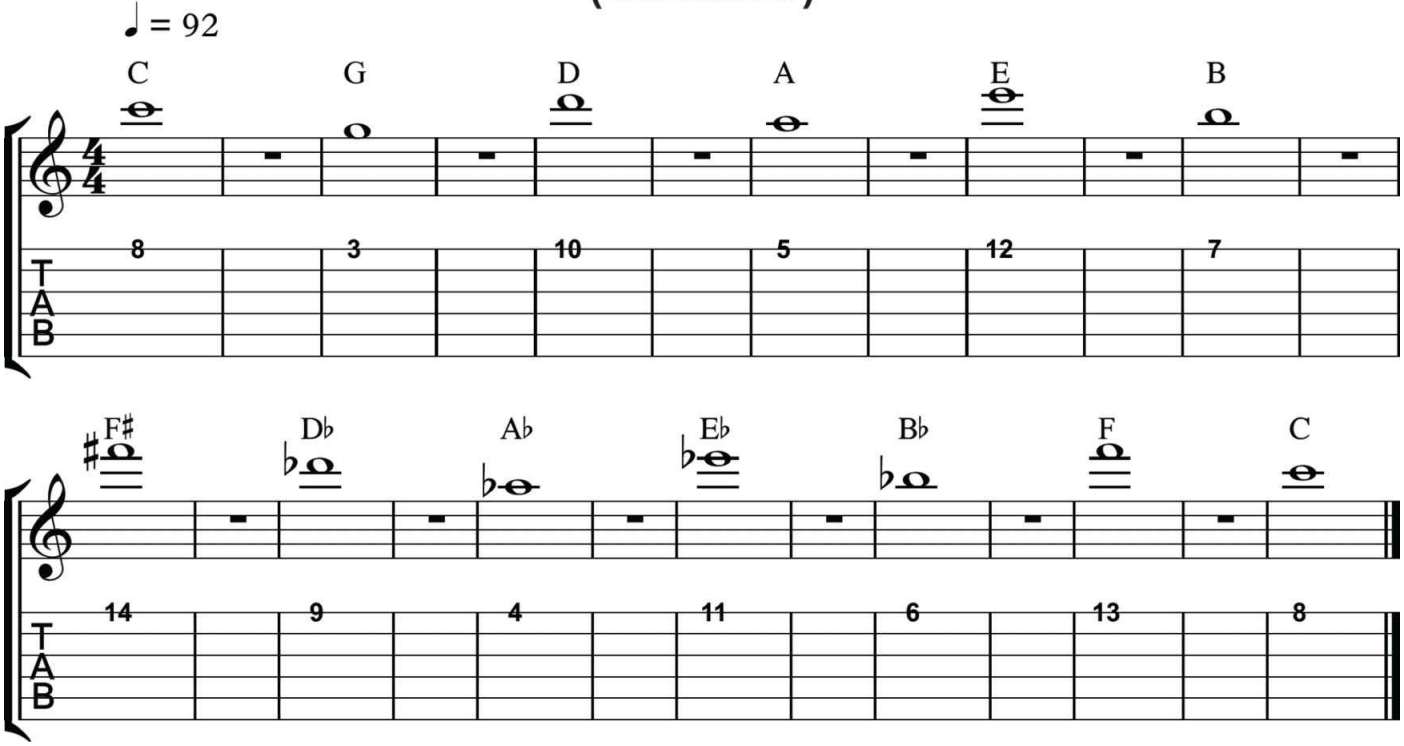


Minor Chords

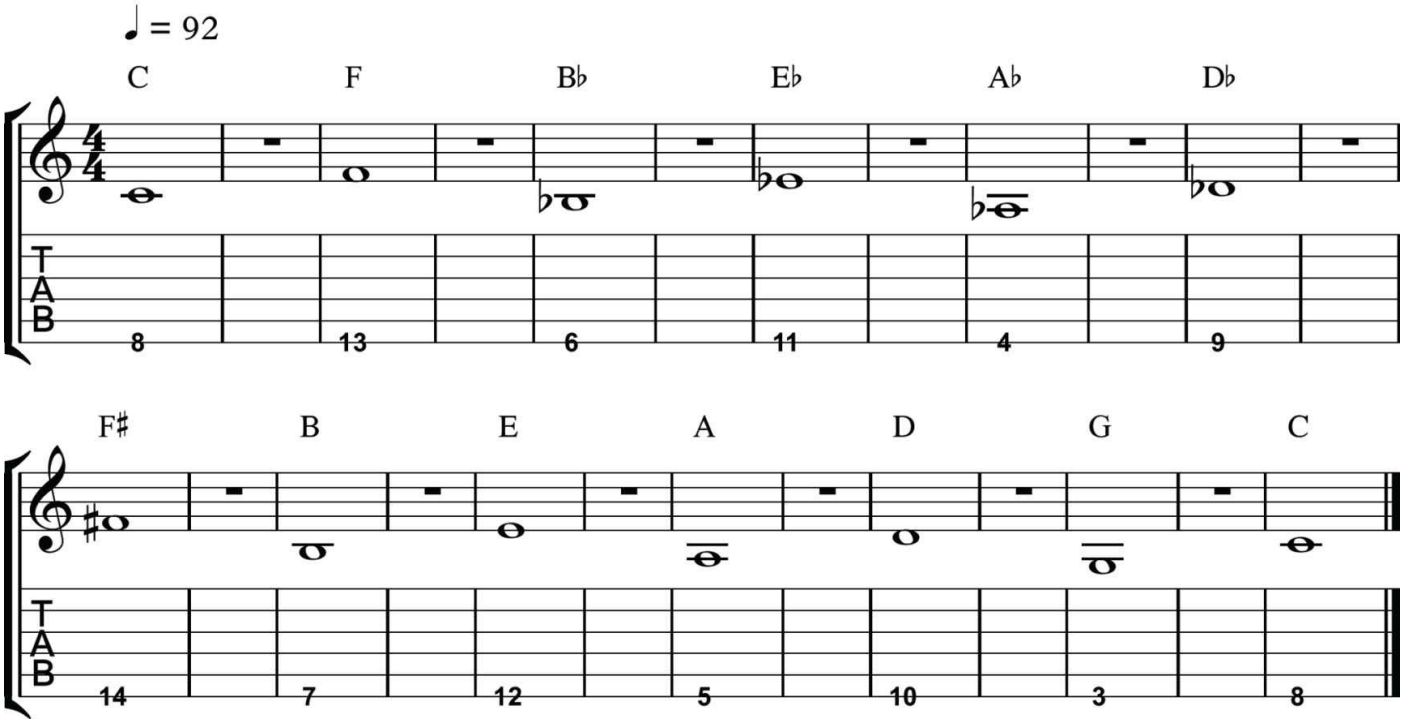


The following exercises will show you how to move the roots of the major pentatonic scale around the entire circle of fifths. Exercise 1 will start at C and move clockwise until arriving back at C, while Exercise 2 will move counterclockwise. Be sure to play each of these notes with your 4th finger, as this is the finger that plays the root of Maj Pent E4 (the one exception is the note G, which should be played with the 3rd finger with your hand in first position).

Moving the Maj Pent Roots, Exercise 1 (clockwise)

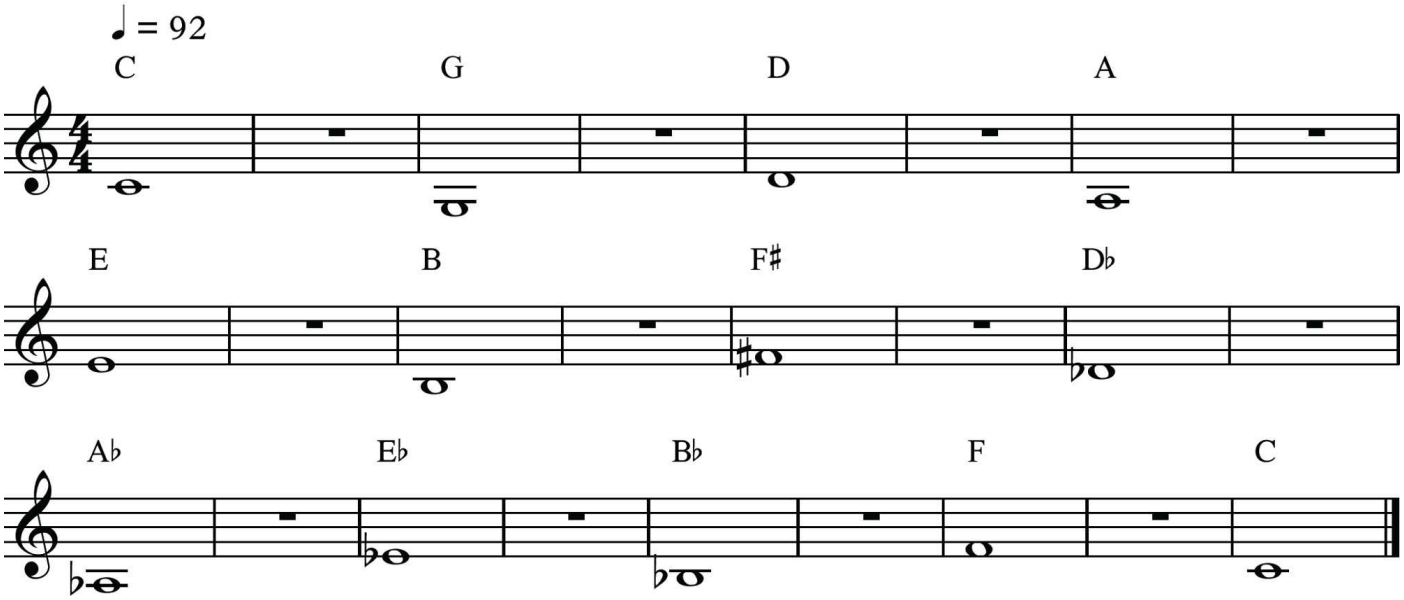


Moving the Maj Pent Roots, Exercise 2 (counter-clockwise)

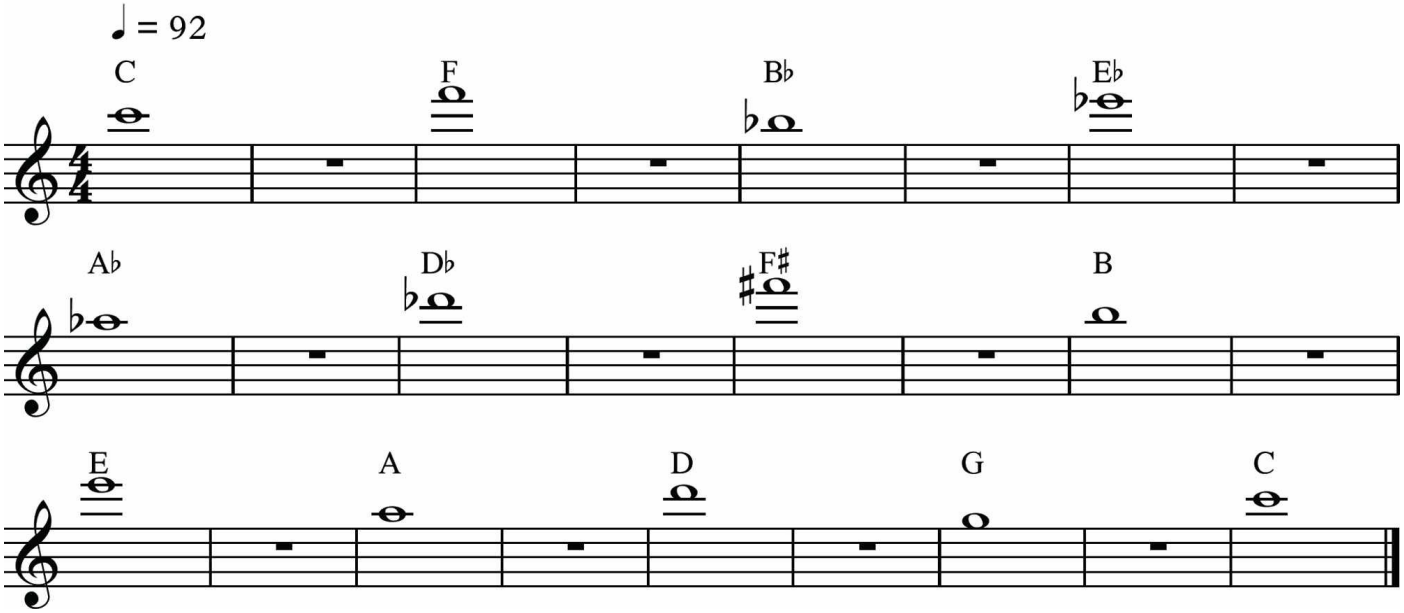


These exercises continue to move the roots around the circle of fifths, but the TAB has been removed from the notation. Try to follow the chord names and move the roots to the appropriate location on the neck, while only using your 4th finger (or 3rd finger when appropriate). Low roots should be used for Exercise 3 and high roots should be used for Exercise 4.

Moving the Maj Pent Roots, Exercise 3 (low roots)

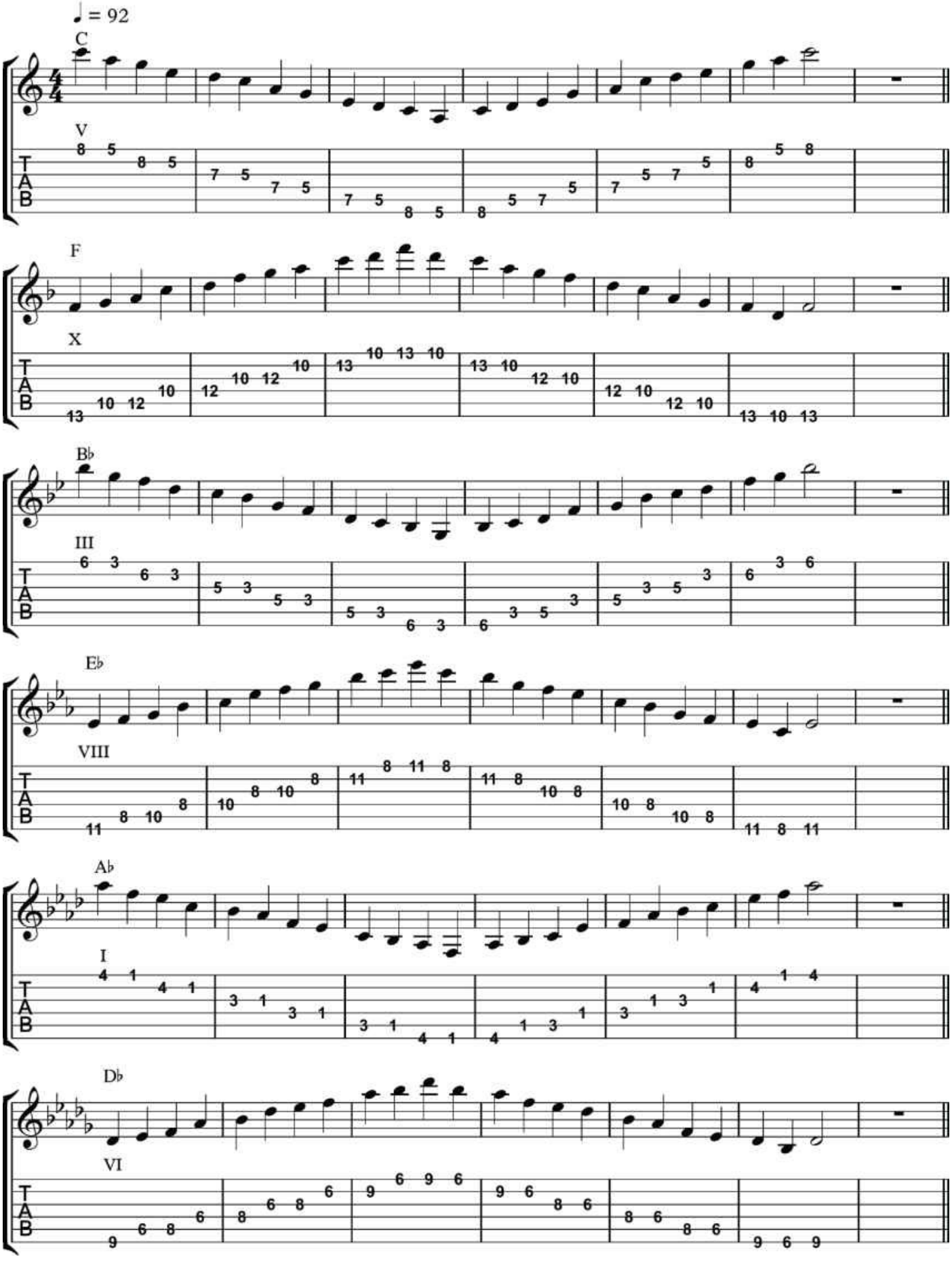


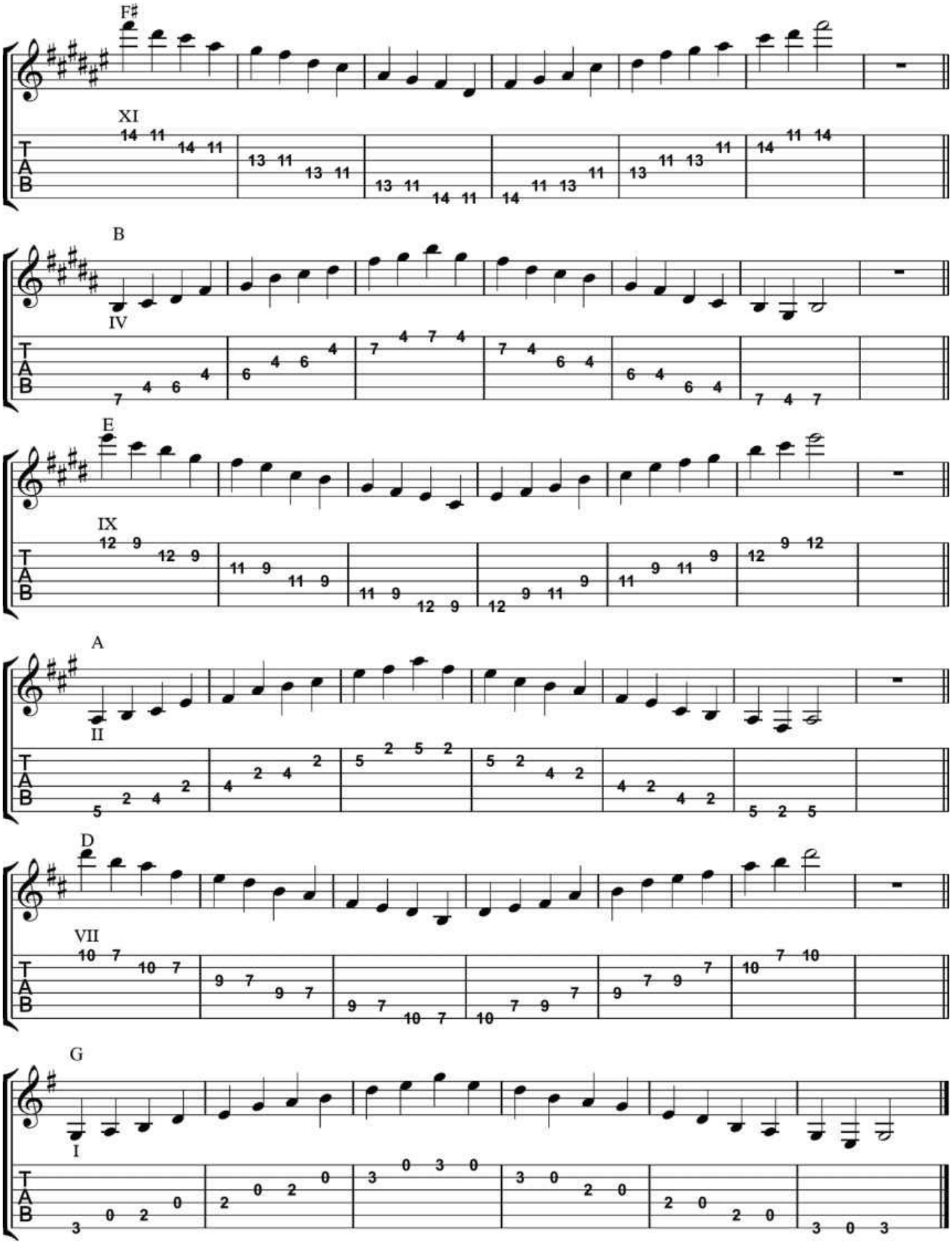
Moving the Maj Pent Roots, Exercise 4 (high roots)



Now that you have successfully moved the roots around the entire circle of fifths, the following exercise will show you how to play Maj Pent E4 counter-clockwise around the circle of fifths, starting at C major and ending at G major. Also, the exercise will alternate between the scales starting on a high root and starting on a low root.

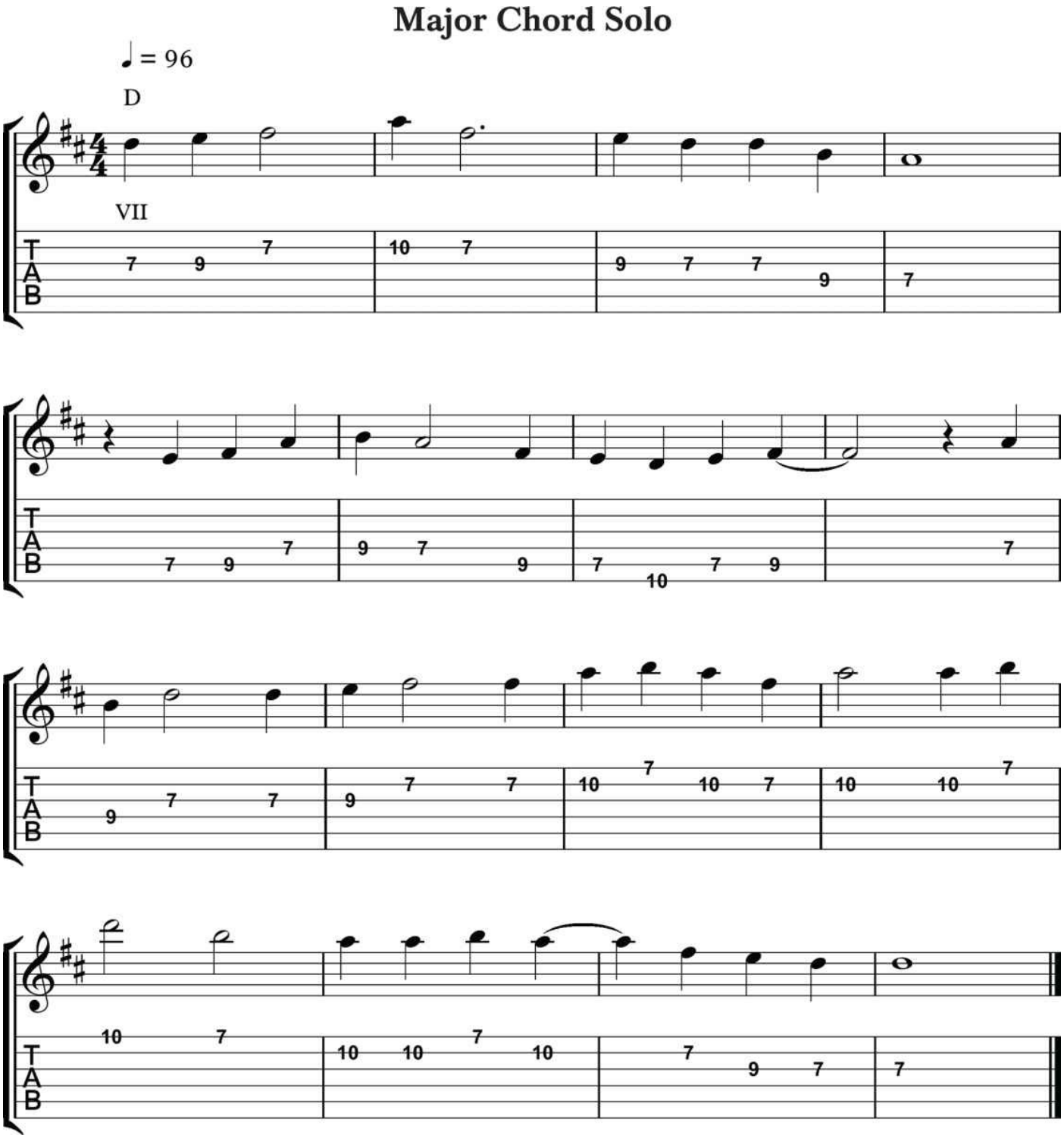
Moving Maj Pent E4, Exercise 3




F♯
XI
B
IV
E
IX
A
II
D
VII
G
I

Part 5: Improvising Over a Major Chord

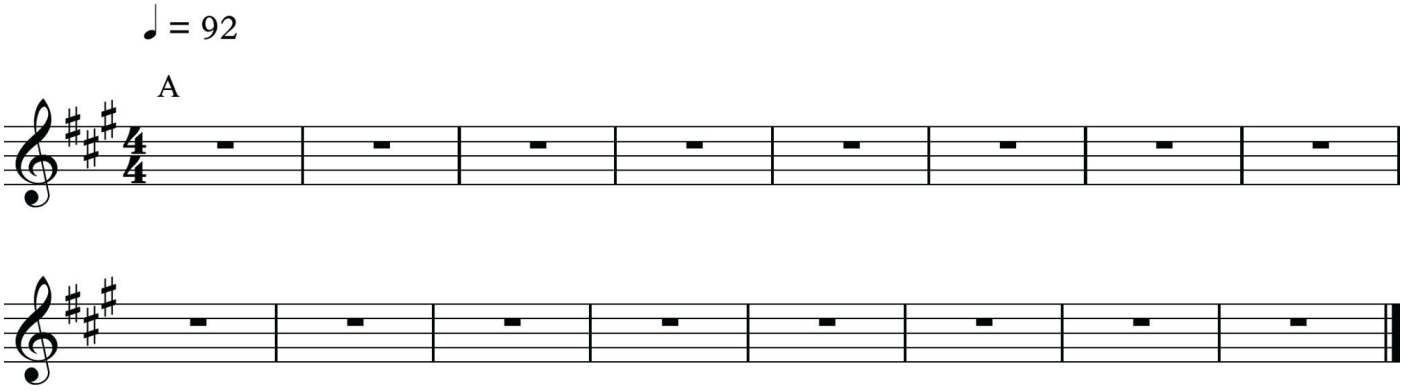
This Major Chord Solo is an excellent example of how to combine all that has been learned so far into a melodic guitar solo over a major chord. This solo uses Maj Pent E4 in 7th position to fit the chord D major and create a D major pentatonic scale. It incorporates quarter, half, dotted-half and whole notes, and commonly has the roots of the scale as the longest notes. Also, the scale stays in sequence (and does not skip over any notes) unless there is a rest or a long note.



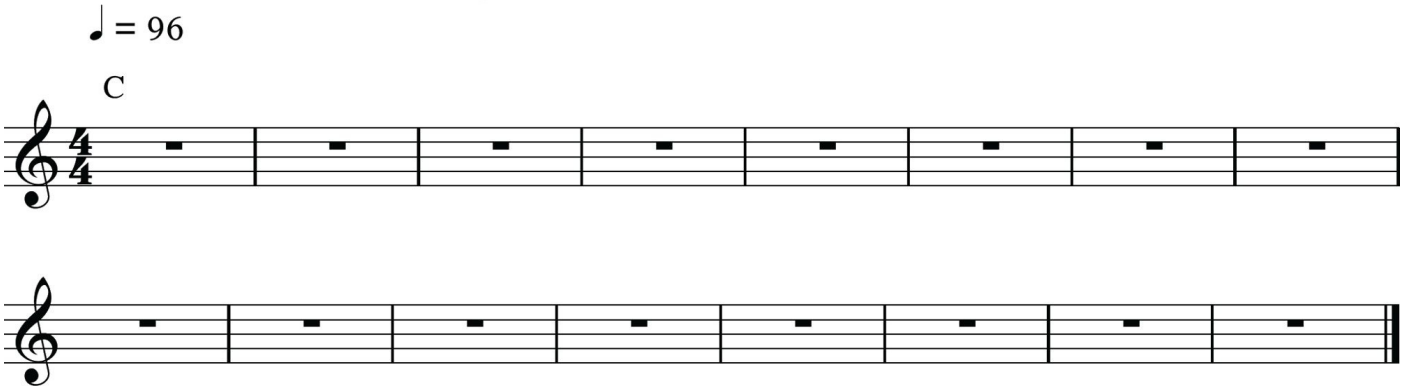
Now try improvising your own guitar solos over these exercises. Try to incorporate the same concepts used in the Major Chord Solo:

- Use Maj Pent E4 with the correct hand position and fingering.
- Use interesting combinations of quarter, half, dotted-half and whole notes.
- Use the roots of the scale as some of the longest notes.
- Keep the scale in sequence unless there is a long note or a rest.

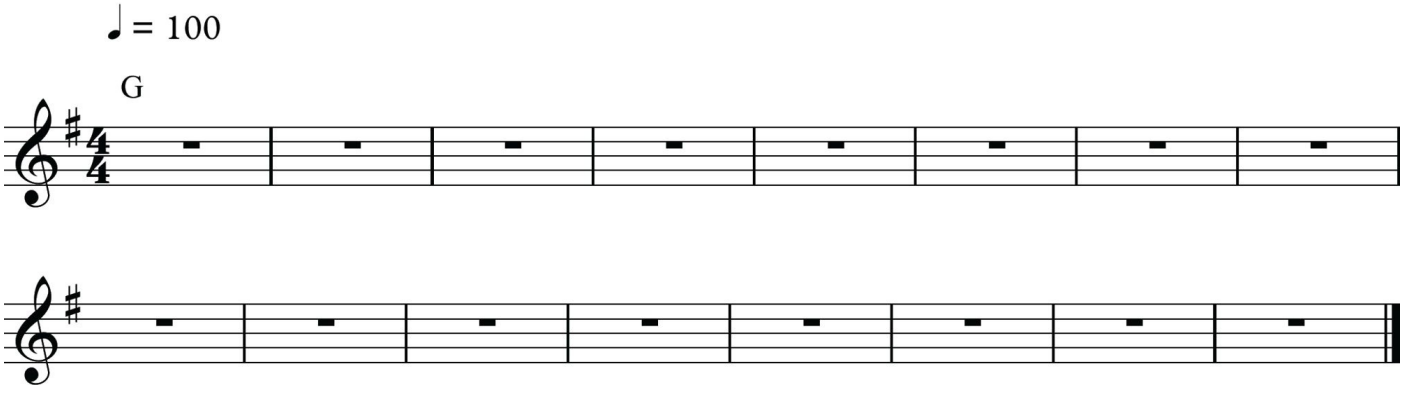
Improvising Over a Major Chord, Exercise 1



Improvising Over a Major Chord, Exercise 2



Improvising Over a Major Chord, Exercise 3



Chapter 4

Eighth Notes, Rhythmic Variations, and Motifs

Although being able to play a major and minor pentatonic scale has helped to define the notes that will be consonant over their respective major and minor chords (and most of their variations), there are now other elements that can be added to make your improvised solos sound more like a collection of interesting melodies, and less like scale exercises.

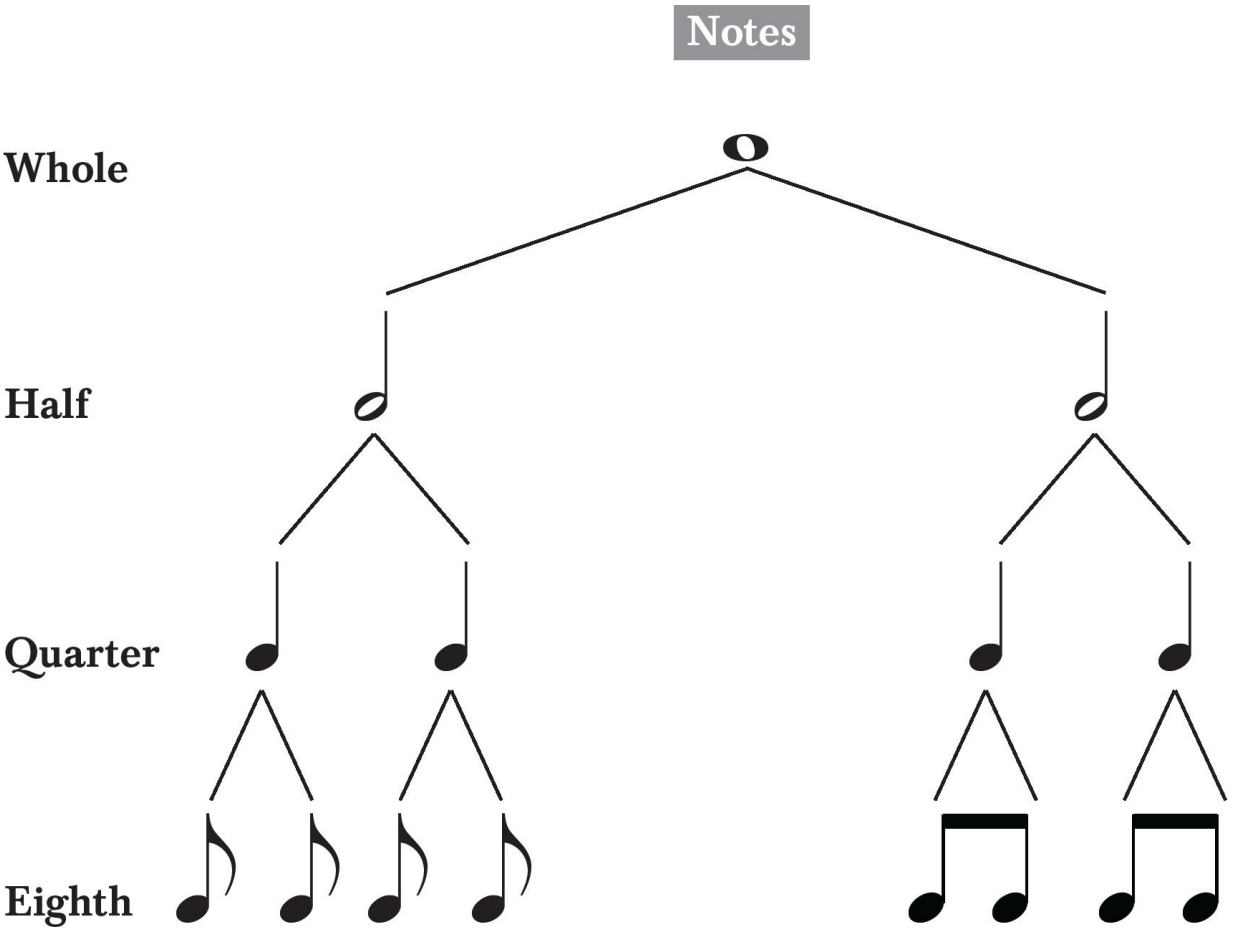
Part 1: Eighth Notes

Eighth notes are half the value of quarter notes, which means that an eighth note will receive half of a beat in a 4/4 time signature. Eighth notes may be notated as a single note, which looks like a quarter note with a flag, or may be grouped together by use of a beam.

Single Eighth Notes **Beamed Eighth Notes**



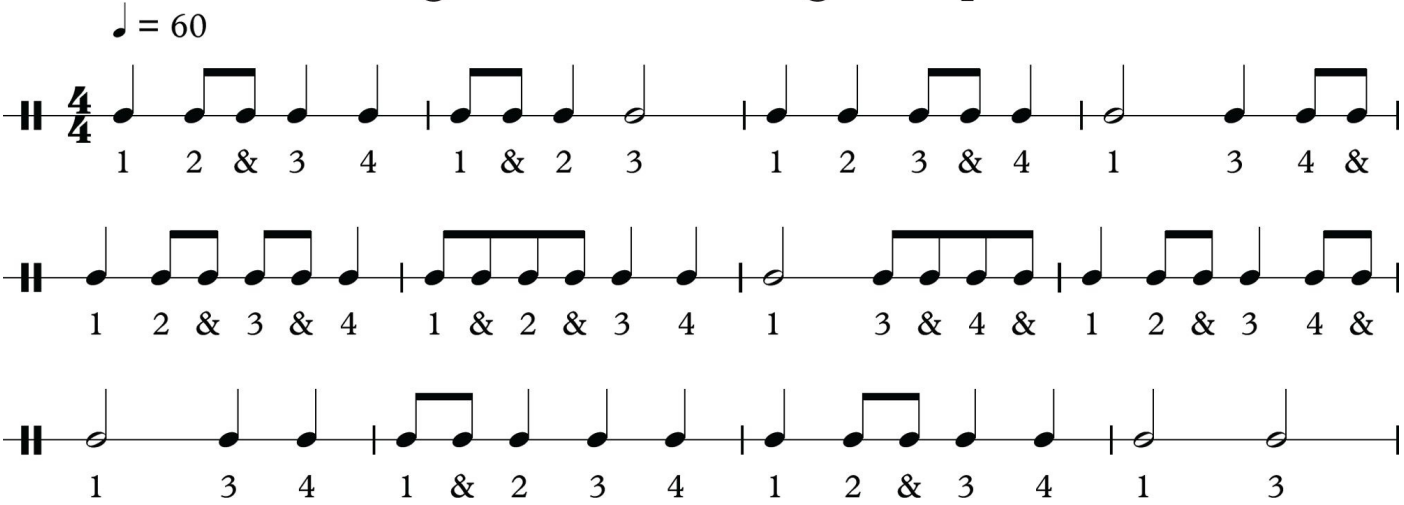
Here is the diagram of note values that was given in Chapter 1, but now includes the eighth note.



(Eighth rests are also available for use in music, but will be covered in a later chapter)

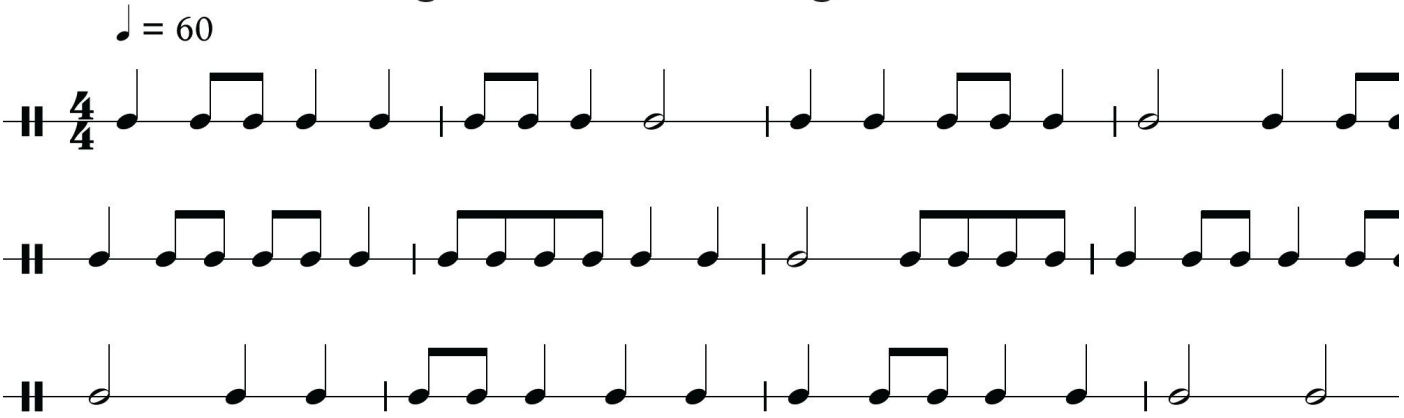
When counting a rhythm which contains two consecutive eighth notes, one of the eighth notes will occur on a beat, and the other will occur between the beats. The eighth note that occurs on the beat should be counted with the appropriate beat number (1, 2, 3 or 4), while the other eighth note should be counted as “and” (notated “&”). Below is an example of the appropriate method that should be used for counting eighth notes.

Eighth Note Counting Example

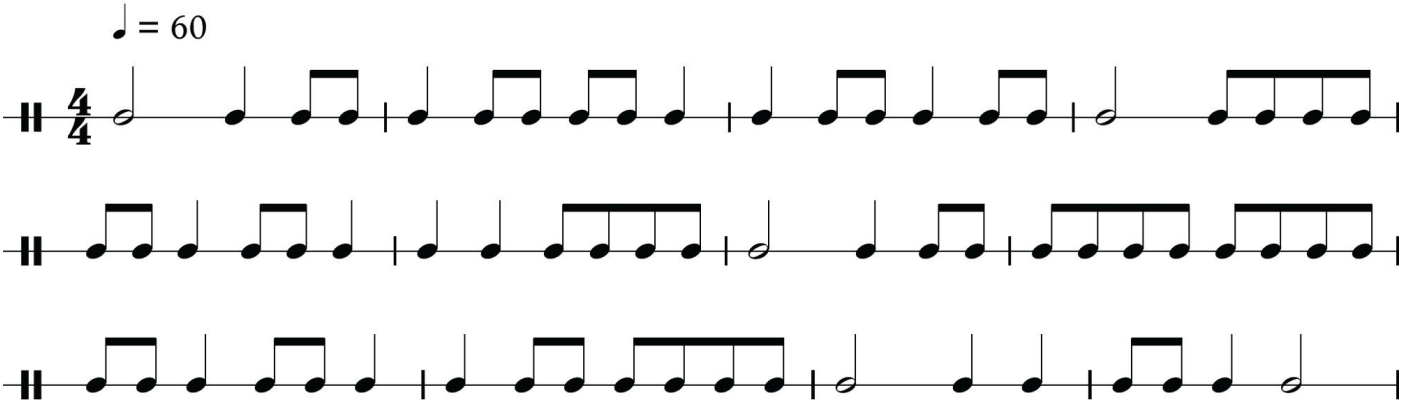


Below are two counting exercises containing eighth note rhythms. Exercise 1 is the same rhythm as the Eighth Note Counting Example, with the counting removed. Work on each exercise until you can accurately count the rhythm with a slow, steady beat.

Eighth Note Counting, Exercise 1



Eighth Note Counting, Exercise 2



Playing eighth notes on the guitar will require a new picking technique — ***alternate picking***. This method of picking involves using downstrokes when picking notes that occur on the beats, and using upstrokes when picking notes that occur between the beats (on the “and”). Below are the commonly used symbols which can guide you in whether to use an upstroke or a downstroke.

Downstroke



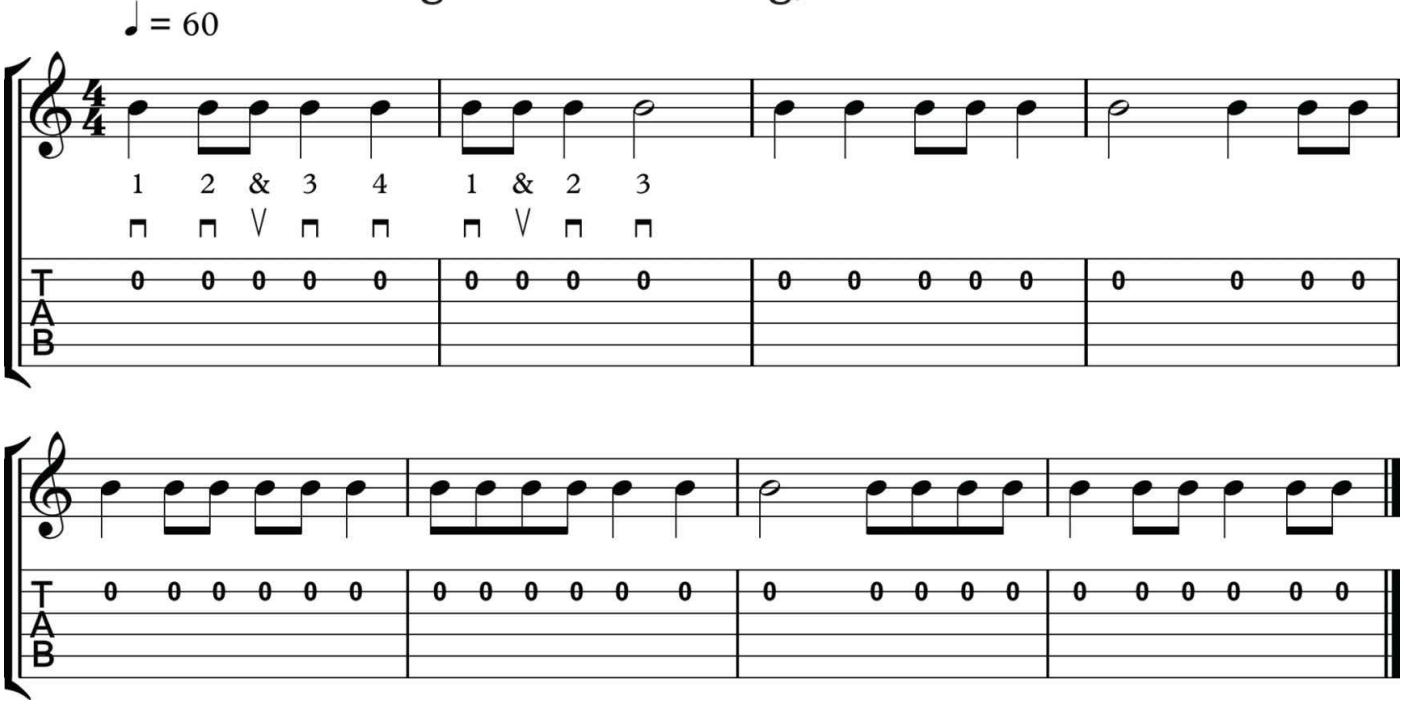
(on the beat)

Upstroke

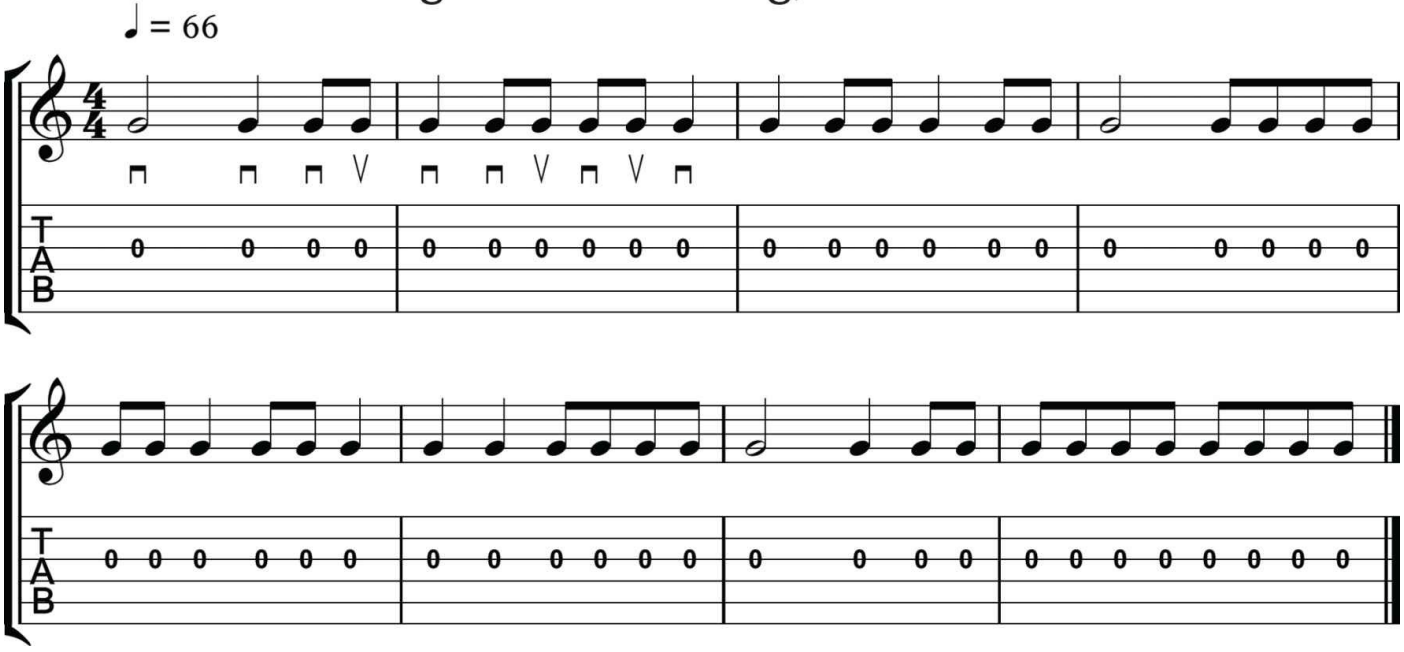
(on the “and”)

Here are two eighth note picking exercises that can be used to train the picking hand to accurately use alternate picking. First, be sure that you can count each exercise at the notated tempo. Then, use alternate picking to play the exercise, making sure to use upstrokes on the “and.”

Eighth Note Picking, Exercise 1

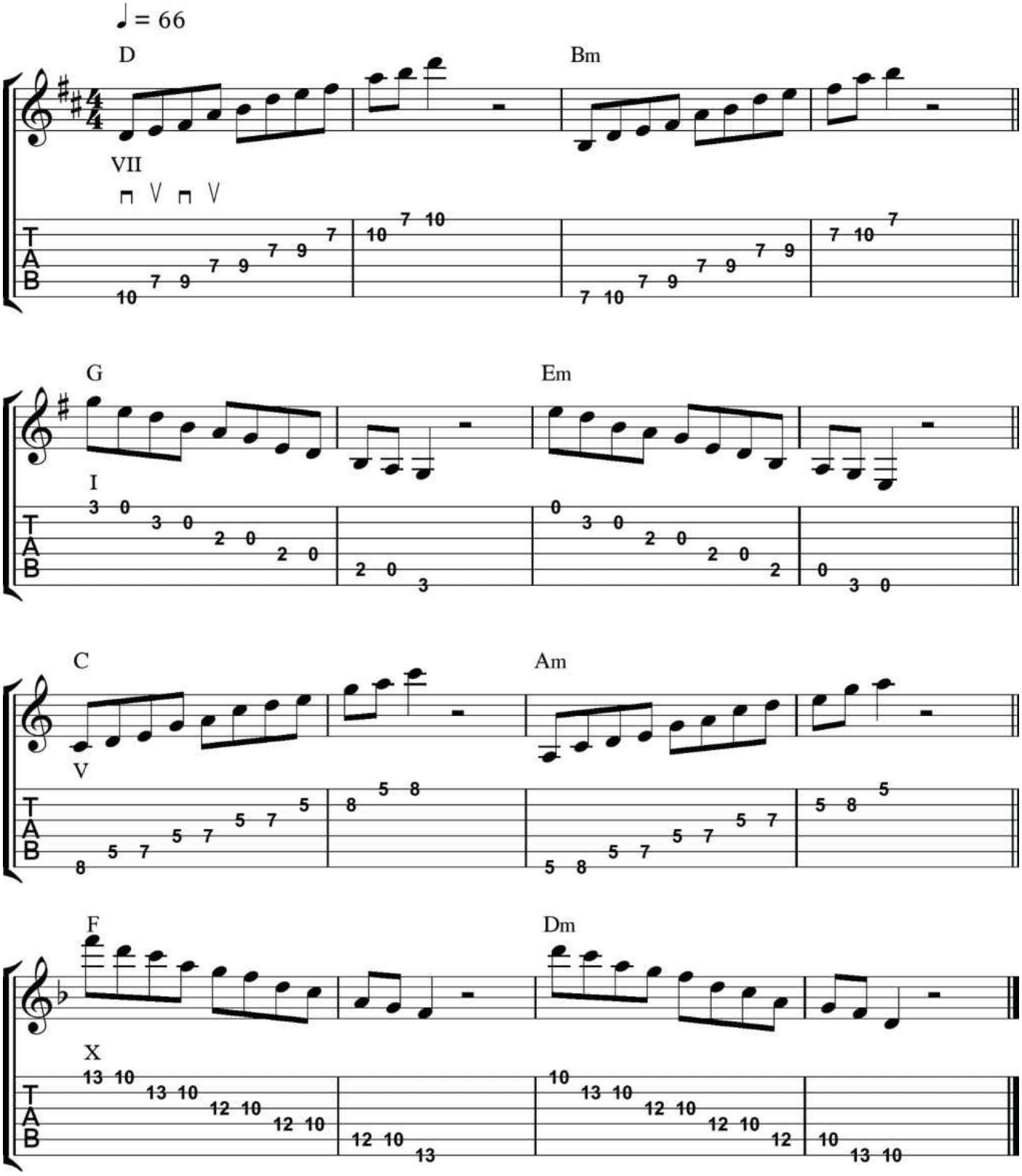


Eighth Note Picking, Exercise 2



Scales can also now be played as a sequence of eighth notes. This will help to build accuracy with alternate picking and also increase your speed. The following exercise uses eighth notes to play some of the relative major and minor pentatonic scales based around the circle of fifths.

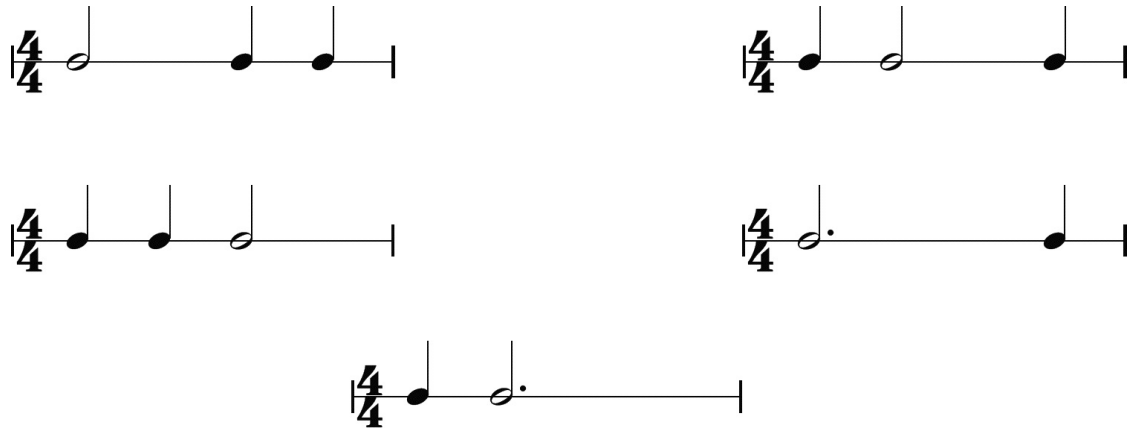
Using Eighth Notes to Play Relative Pentatonic Scales



Part 2: Rhythmic Variations

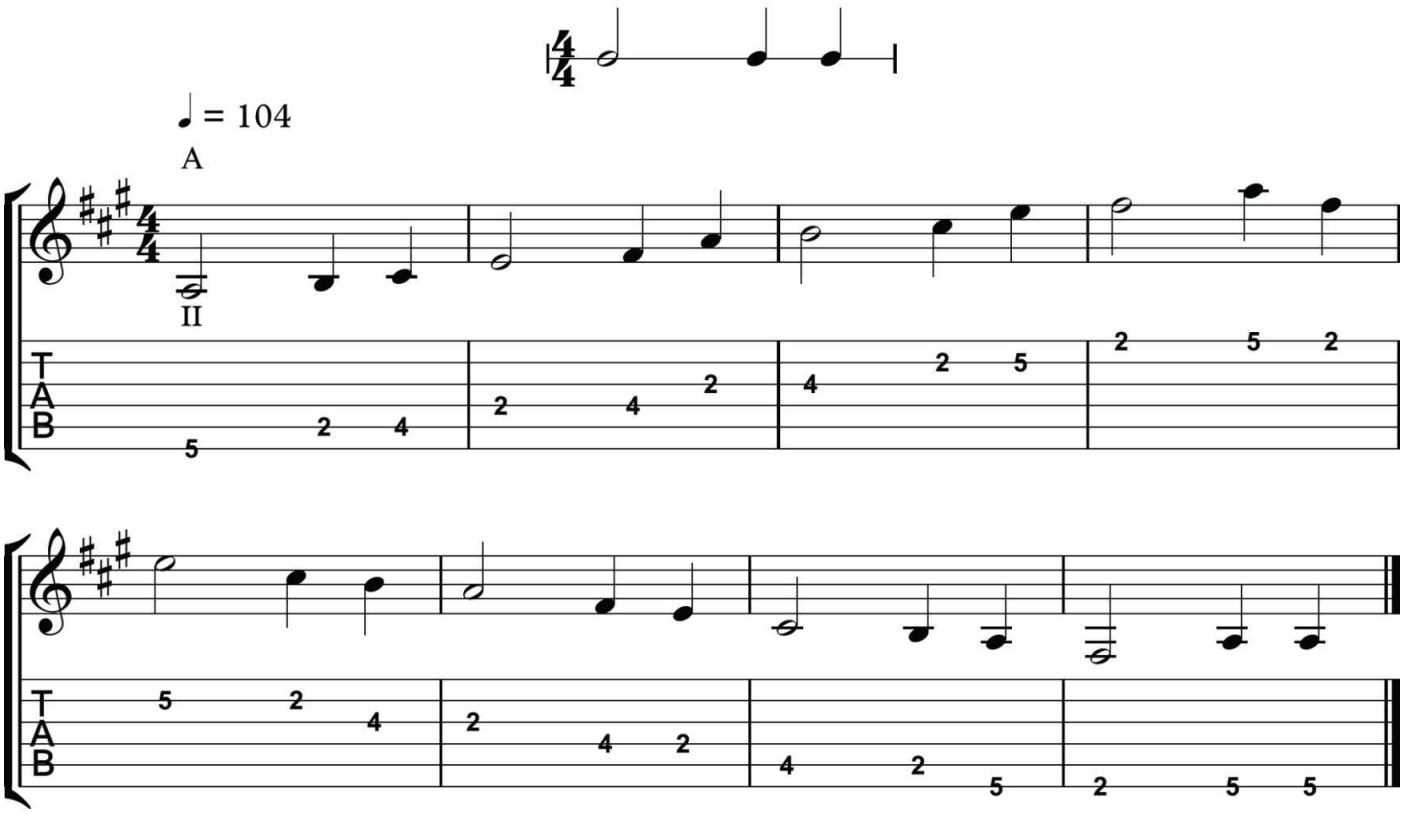
When improvising, playing the appropriate notes is only half of what will make a solo sound solid and musically pleasing. The other element to be obtained is an interesting rhythm of those notes. All scale exercises thus far have incorporated a very stagnant rhythm, where all notes are exactly the same length. This style of playing can become very boring to a listener when you are improvising.

To get you started with the possibilities for rhythmic variations, here are all of the possible one-measure rhythmic patterns that combine quarter notes with half notes or dotted-half notes in 4/4 time. All of these rhythms have already been incorporated into the previous solos, and should be easily understood.

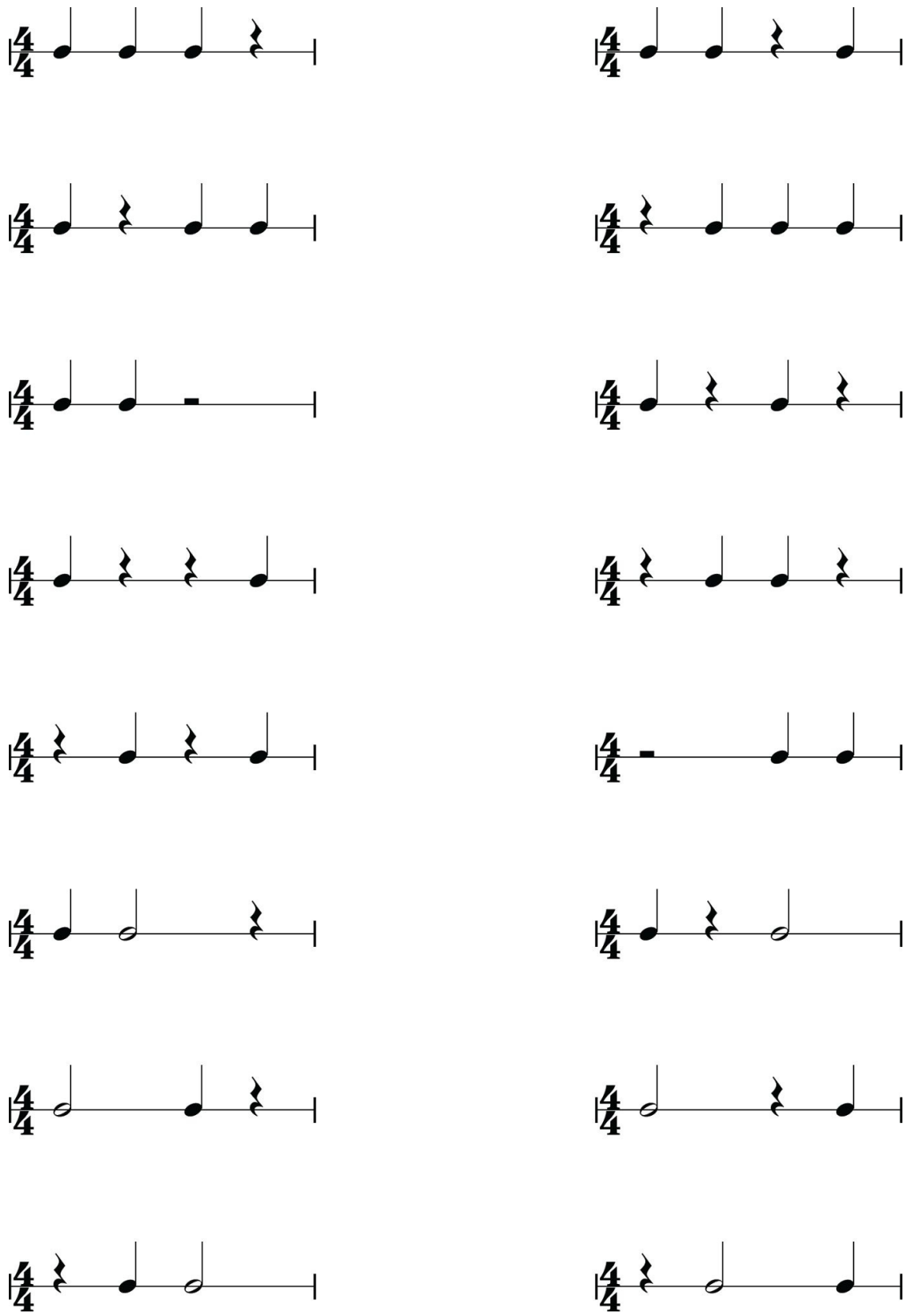


The following example shows how these rhythms can be used in scale practicing. Playing the rhythm in repetition through the scale will make it a very comfortable rhythm for you to play and will make it readily available for use when you are improvising. It is very common for the scale to reach the ending root while the rhythm of the final measure is not yet complete. In these instances, the rhythm of the last measure should be completed by repeating the root of the scale.

Playing the Pentatonic Scale in Rhythm, Exercise 1



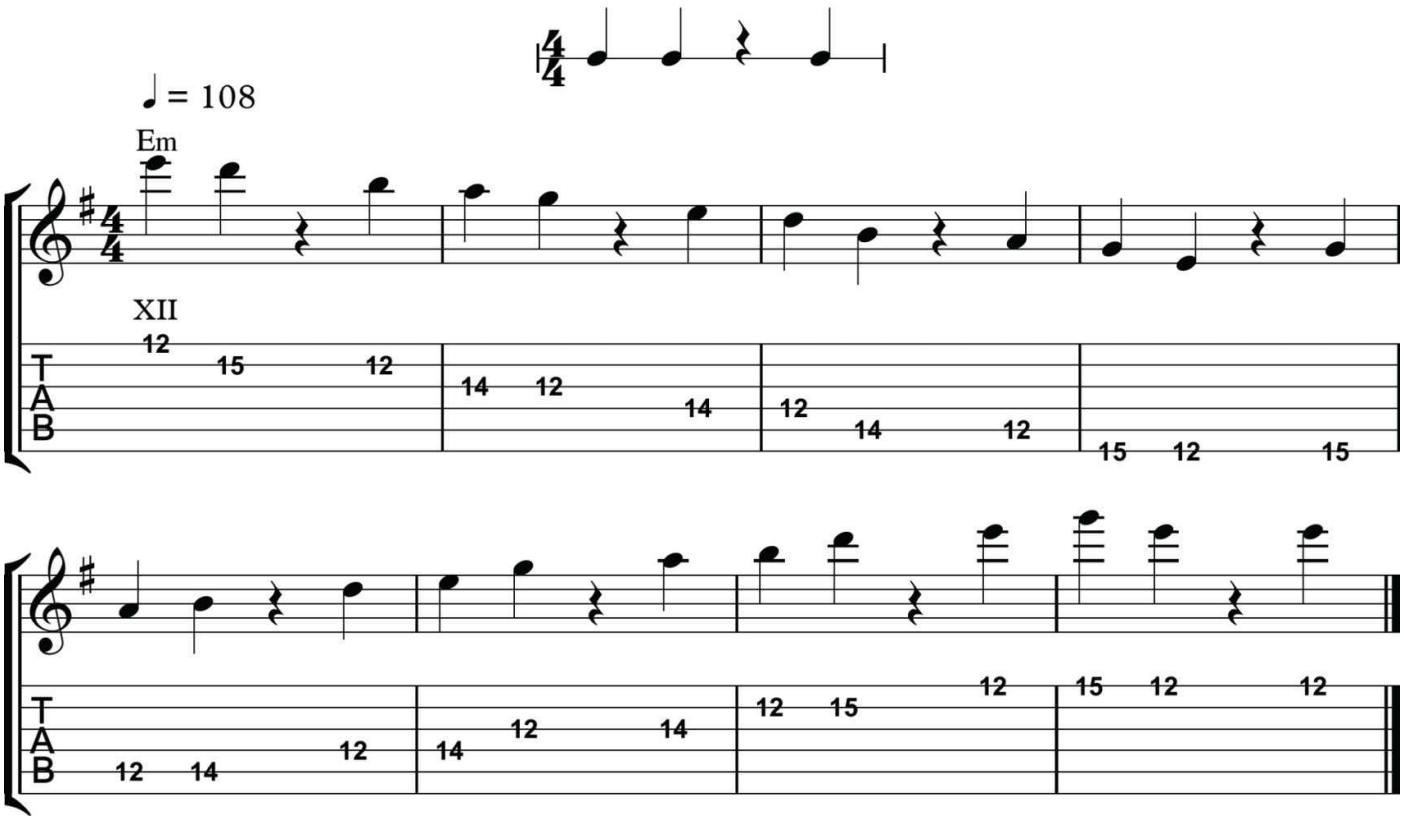
When the use of half rests and quarter rests is added to these one-measure rhythmic variations, the rhythmic options greatly expand. When using at least two notes per measure (similar to the previous rhythmic variations), what was five possible rhythmic variations using only notes becomes sixteen possible rhythmic variations using notes and rests. Here are all of the possible one-measure rhythmic patterns that combine quarter notes, half notes, quarter rests and half rests in 4/4 time.



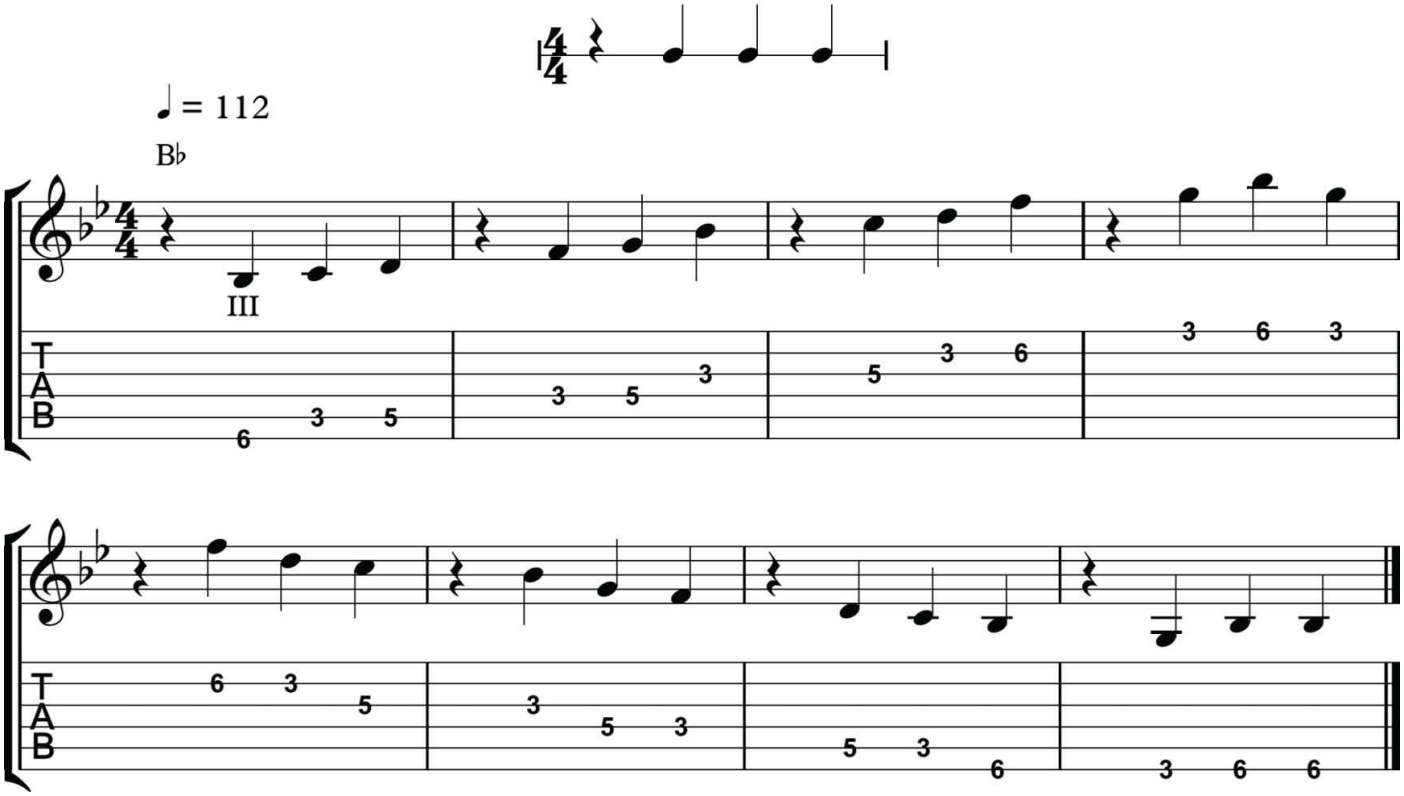
It is very important to acknowledge the rests in each of these patterns, as it produces a very different overall sound. The absence of notes (rests) can be a very good tool for improvising, as it can often make the listener wonder what you will play next.

The following examples show how these rhythms can be used in scale practicing. Although there are only a few examples, it is best to try each of these rhythms using major and minor pentatonic scales to ensure that you have full understanding and ability to use these rhythms when improvising.

Playing the Pentatonic Scale in Rhythm, Exercise 2

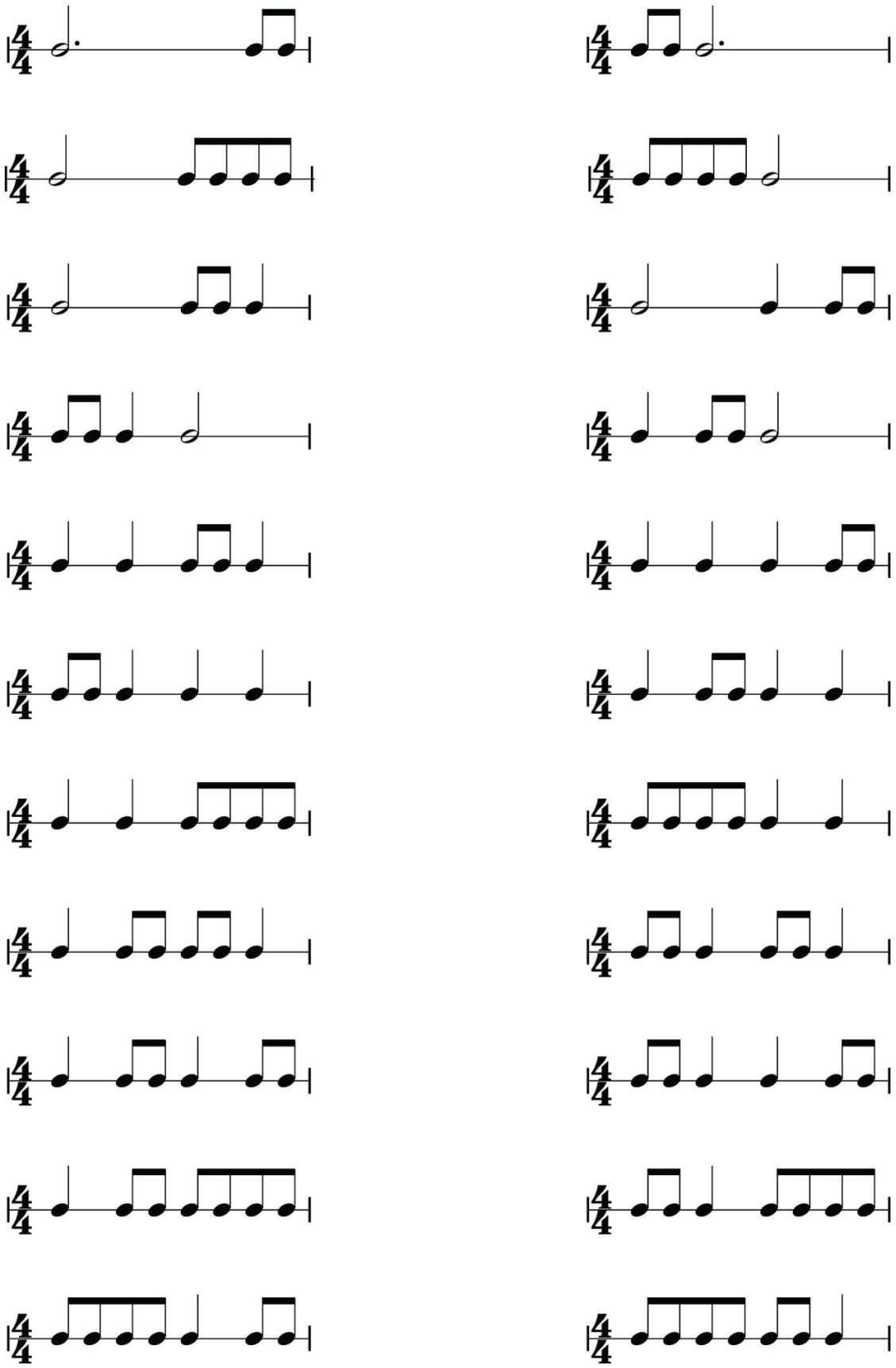


Playing the Pentatonic Scale in Rhythm, Exercise 3



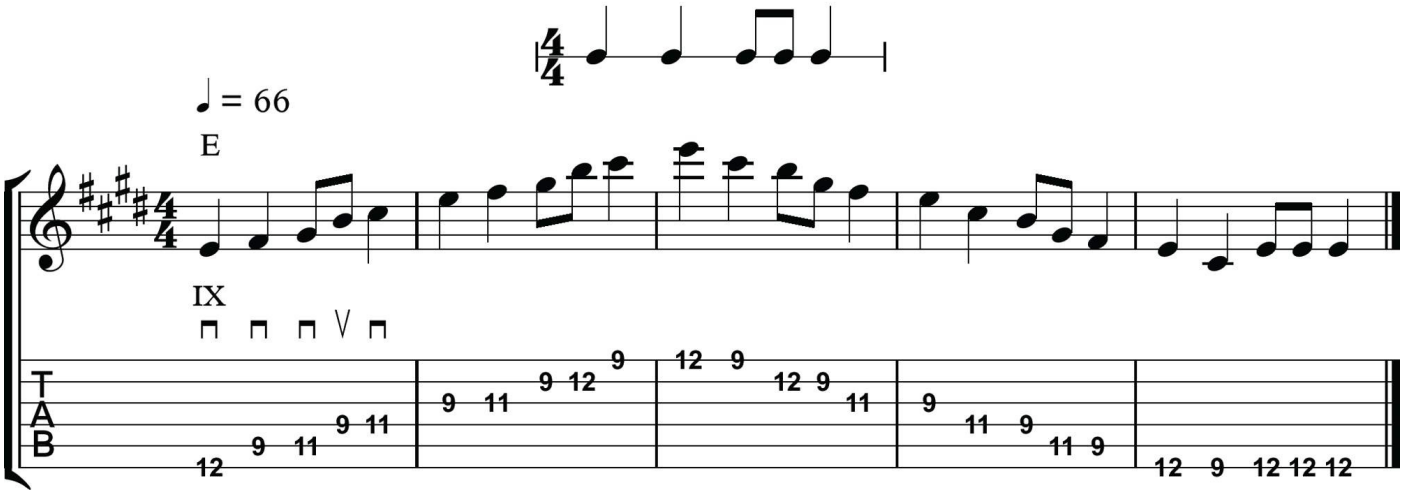
Now choose some other rhythms from the previous page and try to use them to play major and minor pentatonic scales. Remember to acknowledge the rests by silencing your string!

Eighth note rhythmic variations may also be used in improvisation to create faster, more compact rhythms. Here are some of the possible one-measure rhythmic patterns that combine eighth notes with quarter notes, half notes or dotted-half notes in 4/4 time.

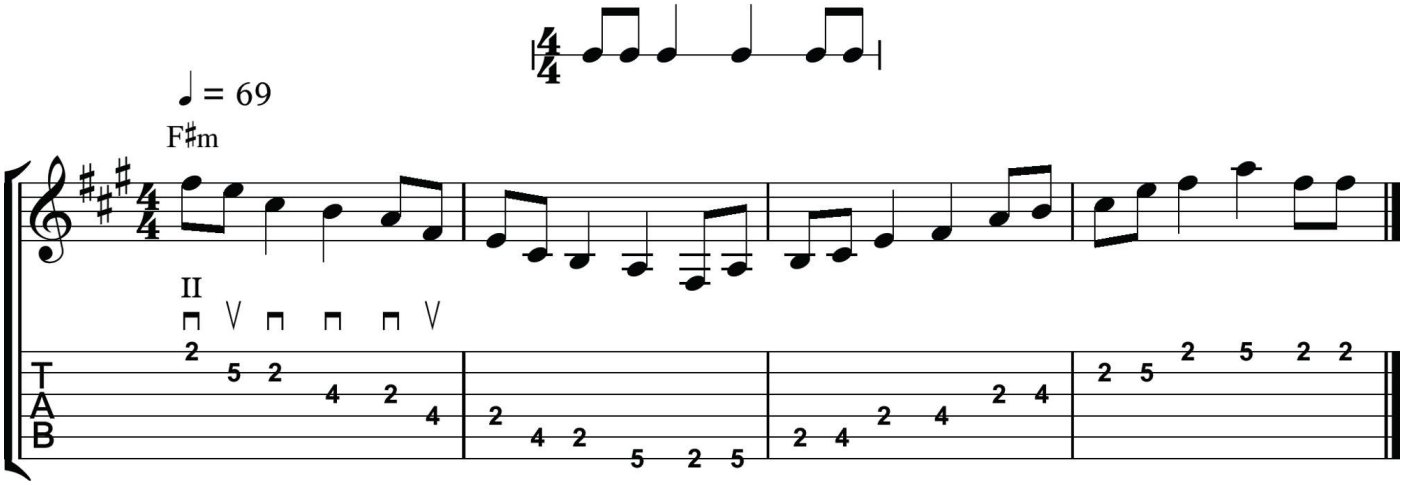


The following examples show how these rhythms can be used in scale practicing. As with previous examples, the root will be repeated in the last measure to complete the rhythm.

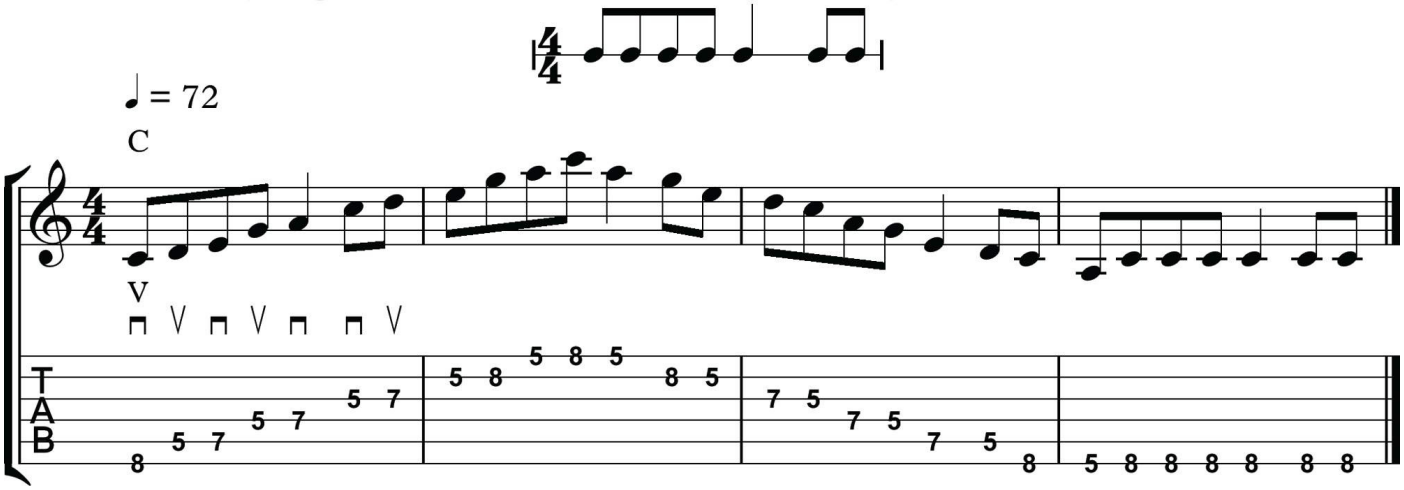
Playing the Pentatonic Scale in Rhythm, Exercise 4



Playing the Pentatonic Scale in Rhythm, Exercise 5



Playing the Pentatonic Scale in Rhythm, Exercise 6



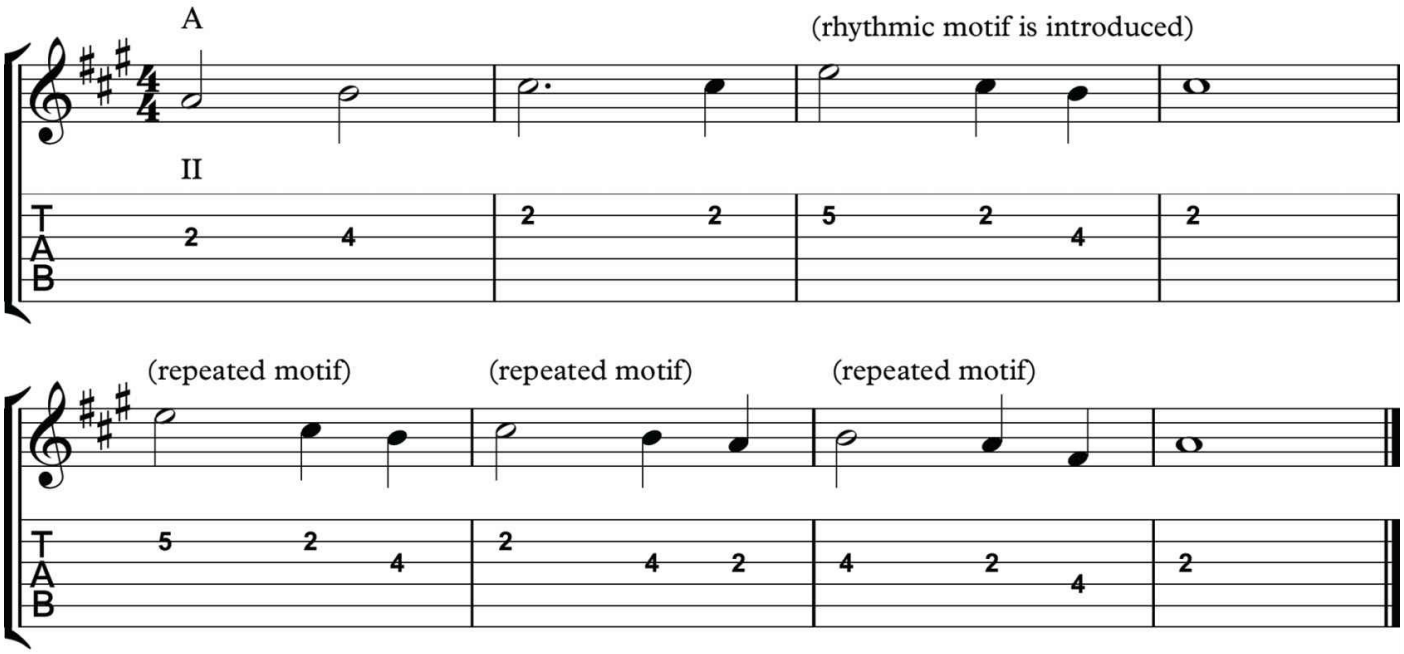
Now choose some other rhythms from the previous page and try to use them to play major and minor pentatonic scales. Remember to use alternate picking for eighth notes!

Part 3: Motifs

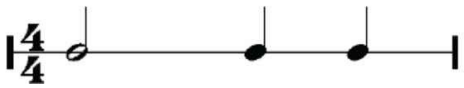
In music, a short rhythmic or melodic pattern that is used in repetition is called a ***motif***. All rhythmic variations that have been introduced in this chapter are considered to be rhythmic motifs once they are played in repetition. A rhythmic motif can, in its simplest form, be a rhythm played in exact repetition. However, the repeated rhythms can also contain a small amount of variation. As long as the repeated rhythm retains enough of the initial motif's rhythm, it will achieve the goal of sounding like a related idea. Below are two examples of how these rhythmic motifs can be incorporated into a solo. The motifs used in each example are also shown in an independent rhythmic form for clear understanding.

The following example introduces a simple one-measure rhythmic motif in measure three and then repeats the rhythmic motif in measures five, six and seven while altering the notes.

Rhythmic Motif Example 1

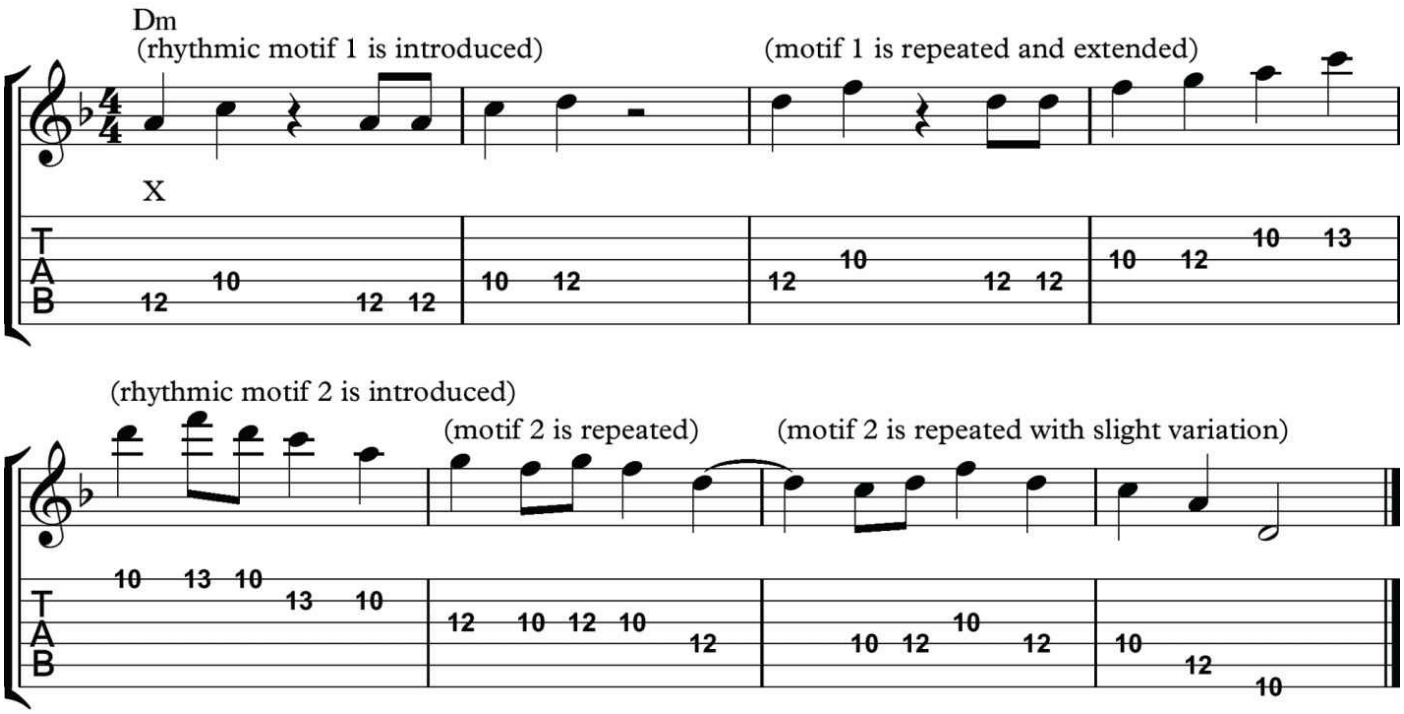


Rhythmic Motif

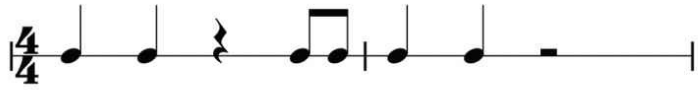


The following example introduces a two-measure rhythmic motif in measures one and two, and then repeats the motif with a bit of an extension in measures three and four. A new one-measure motif is introduced in measure five and is repeated in measure six. The motif is repeated again in measure seven with a slight variation, as it does not include the first quarter note.

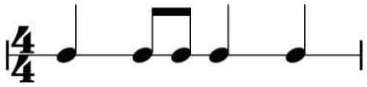
Rhythmic Motif Example 2



Rhythmic Motif 1



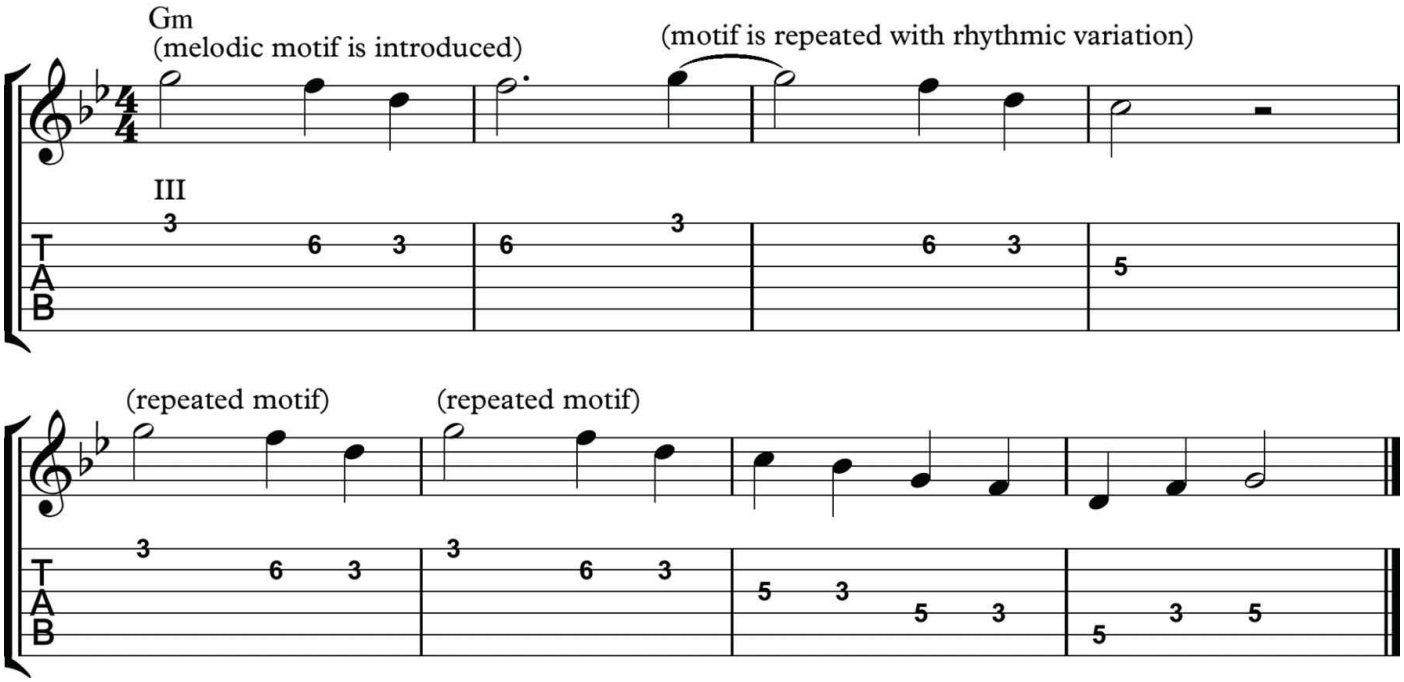
Rhythmic Motif 2



As stated earlier, these motifs can also be melodic. A melodic motif is a short pattern of notes that is played in exact repetition, slight variation, or is moved to a new pattern of notes which follows the same (or very similar) sequence of melodic movement. It is not necessary for the rhythm to remain the same in the repetition of melodic motifs, but retaining a similar rhythm does help the melodic ideas to sound similar to one another. The next page includes two examples of how these melodic motifs can be incorporated into a solo with exact repetition or slight variation.

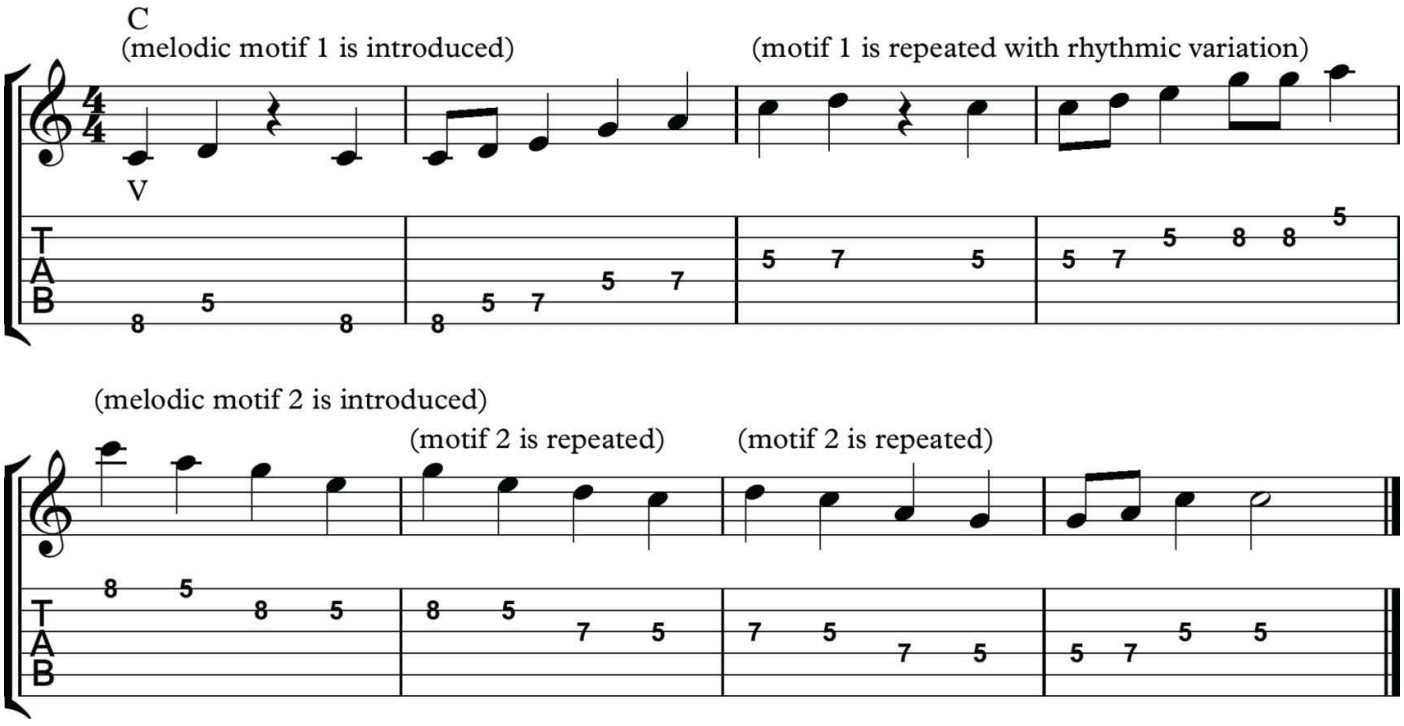
The following example introduces a three-note melodic motif on beat one of measure one. The motif begins again on beat four of measure two, creating a slight rhythmic variation. Finally, the motif is repeated in measure five and six with the initial rhythm.

Melodic Motif Example 1



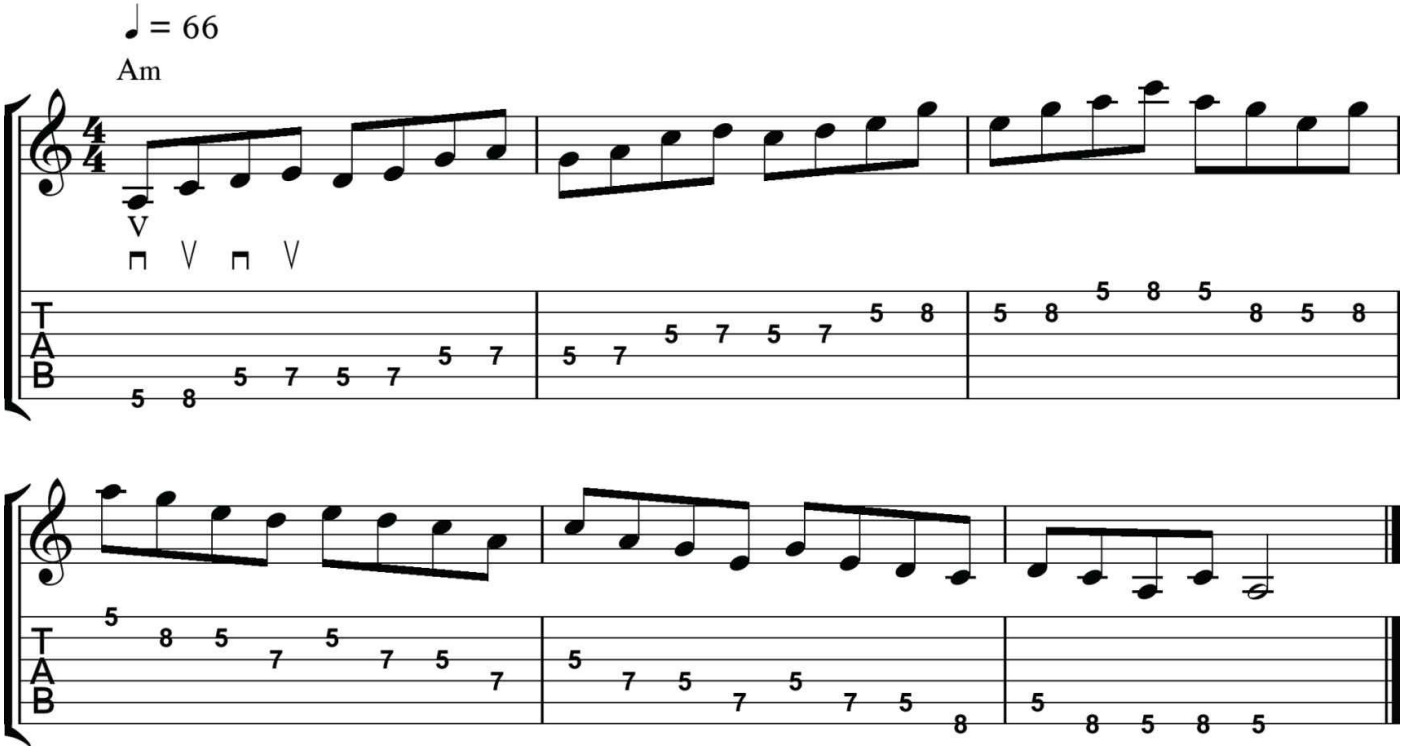
The following example introduces a melodic motif in measures one and two, and then it is repeated one octave higher in measures three and four with a bit of rhythmic variation. A new four-note melodic motif is introduced in measure five and is repeated in measures six and seven using the scale sequence. Although the notes have changed, this is still considered a melodic motif because the direction of melodic movement is the same.

Melodic Motif Example 2

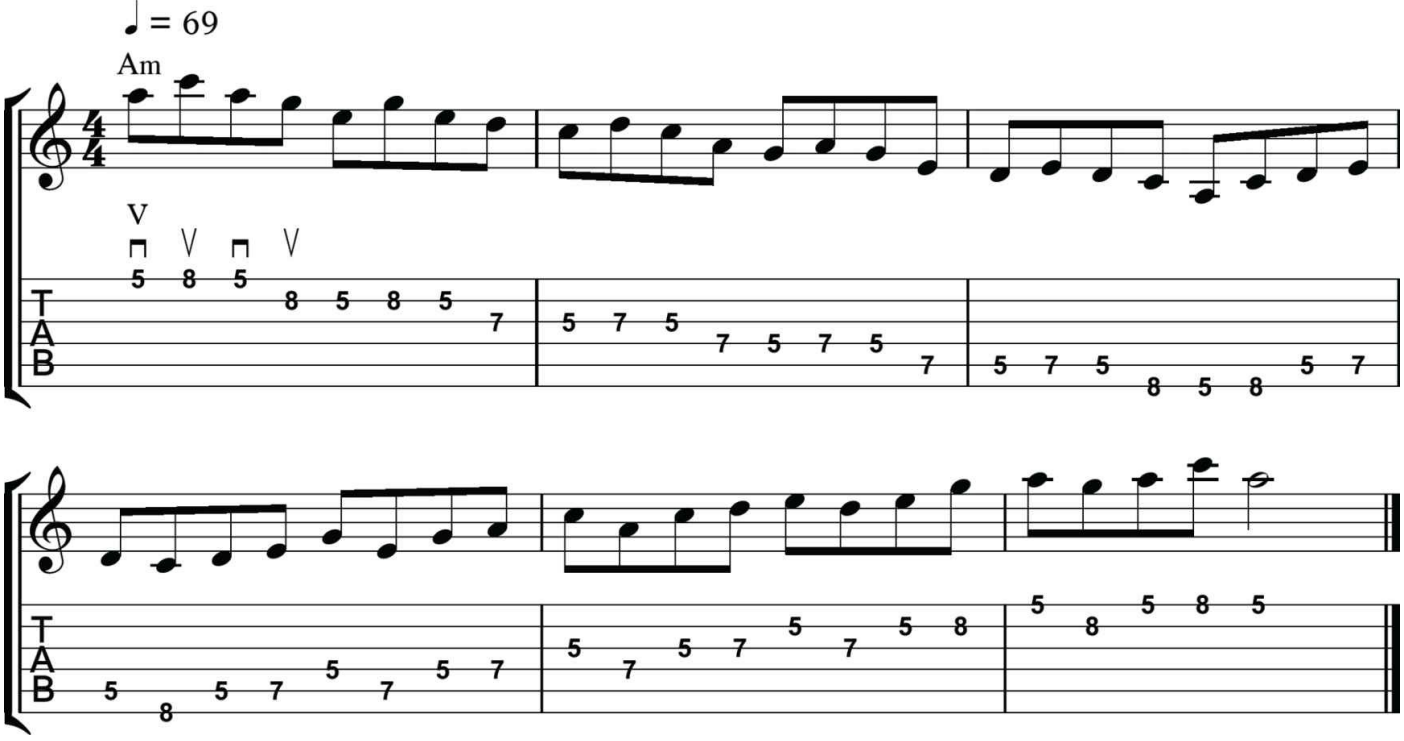


Practicing scales in different melodic patterns can help you become comfortable with creating melodic motifs that follow a scale sequence. Each of the following pattern exercises uses the A minor pentatonic scale.

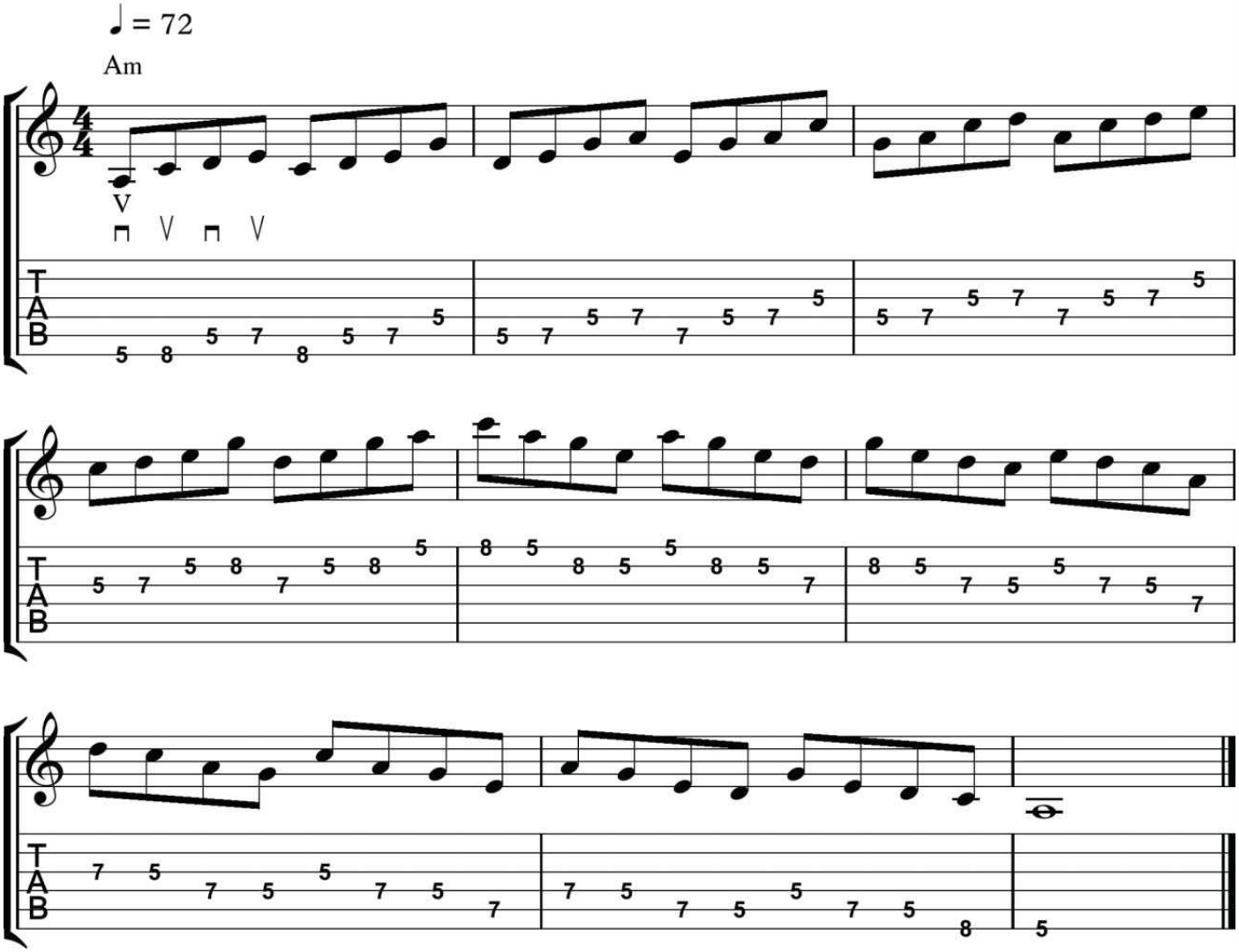
Playing Min Pent E1 in Pattern, Exercise 1



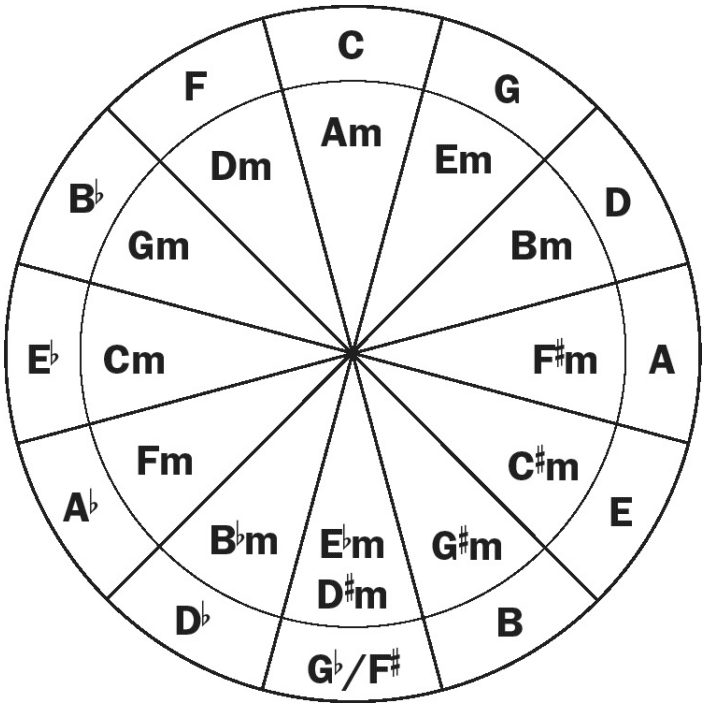
Playing Min Pent E1 in Pattern, Exercise 2



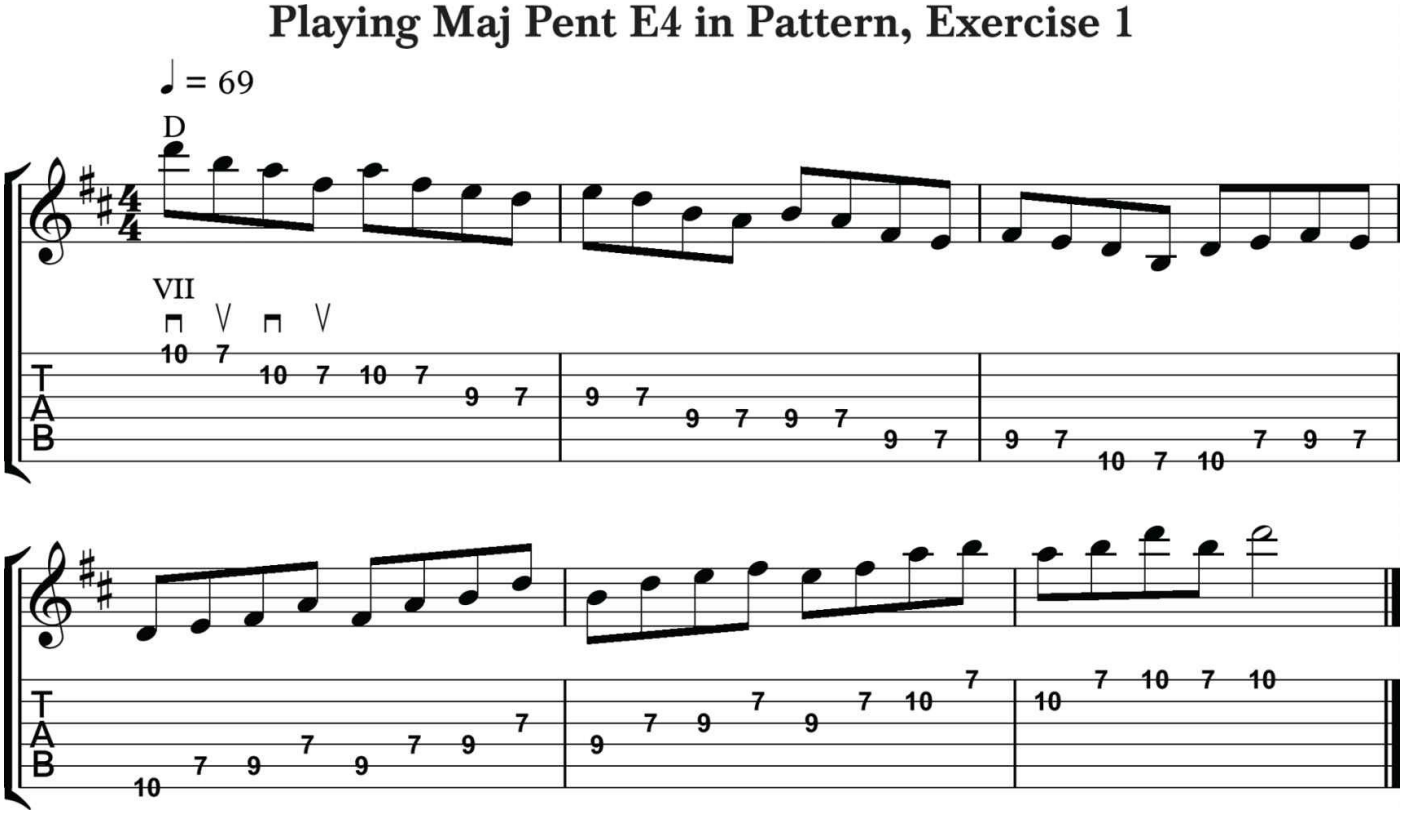
Playing Min Pent E1 in Pattern, Exercise 3



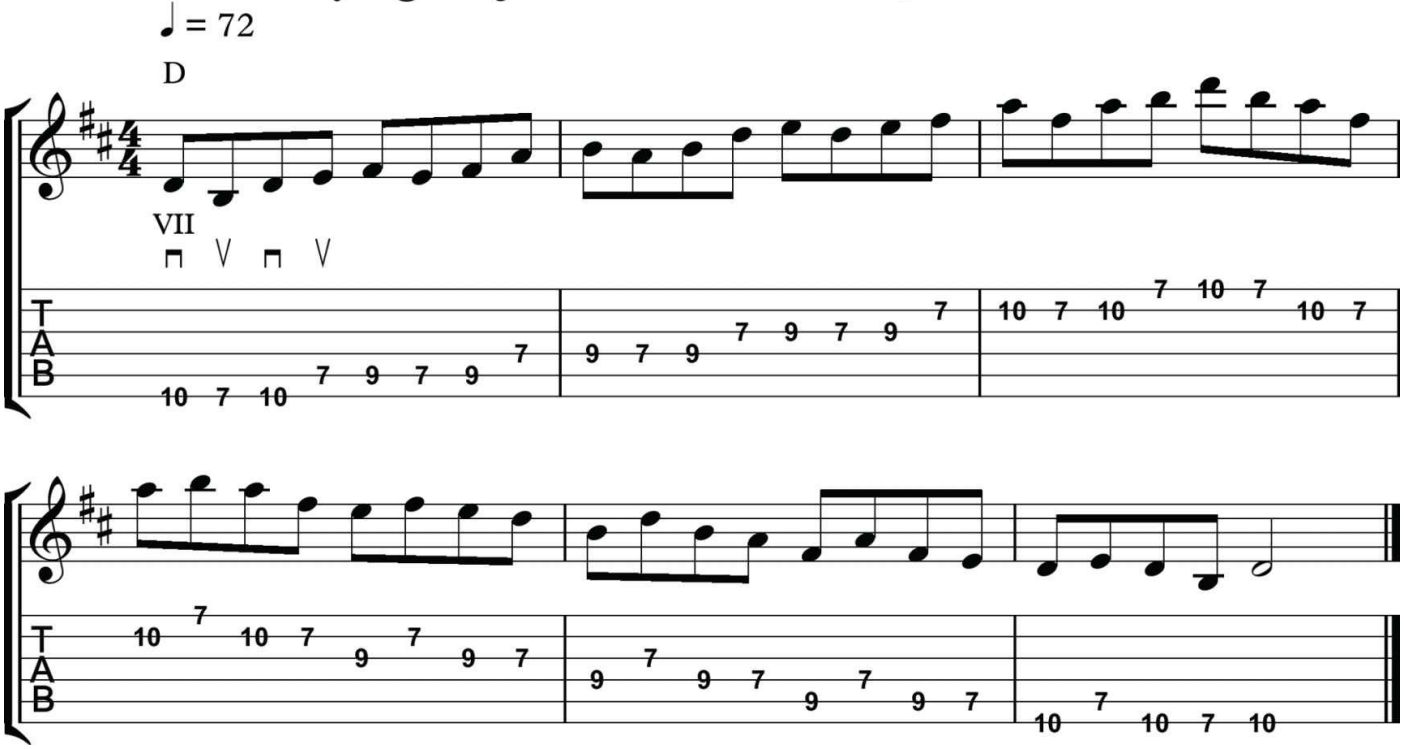
Now take each of these minor pentatonic scale patterns and move them around the circle of fifths so that they may be applied to every minor pentatonic scale. Leave one measure of rest between each scale to give yourself time to move to the next appropriate hand position. Remember, all of the minor keys are listed on the inside of the circle, and are accompanied by “m.”



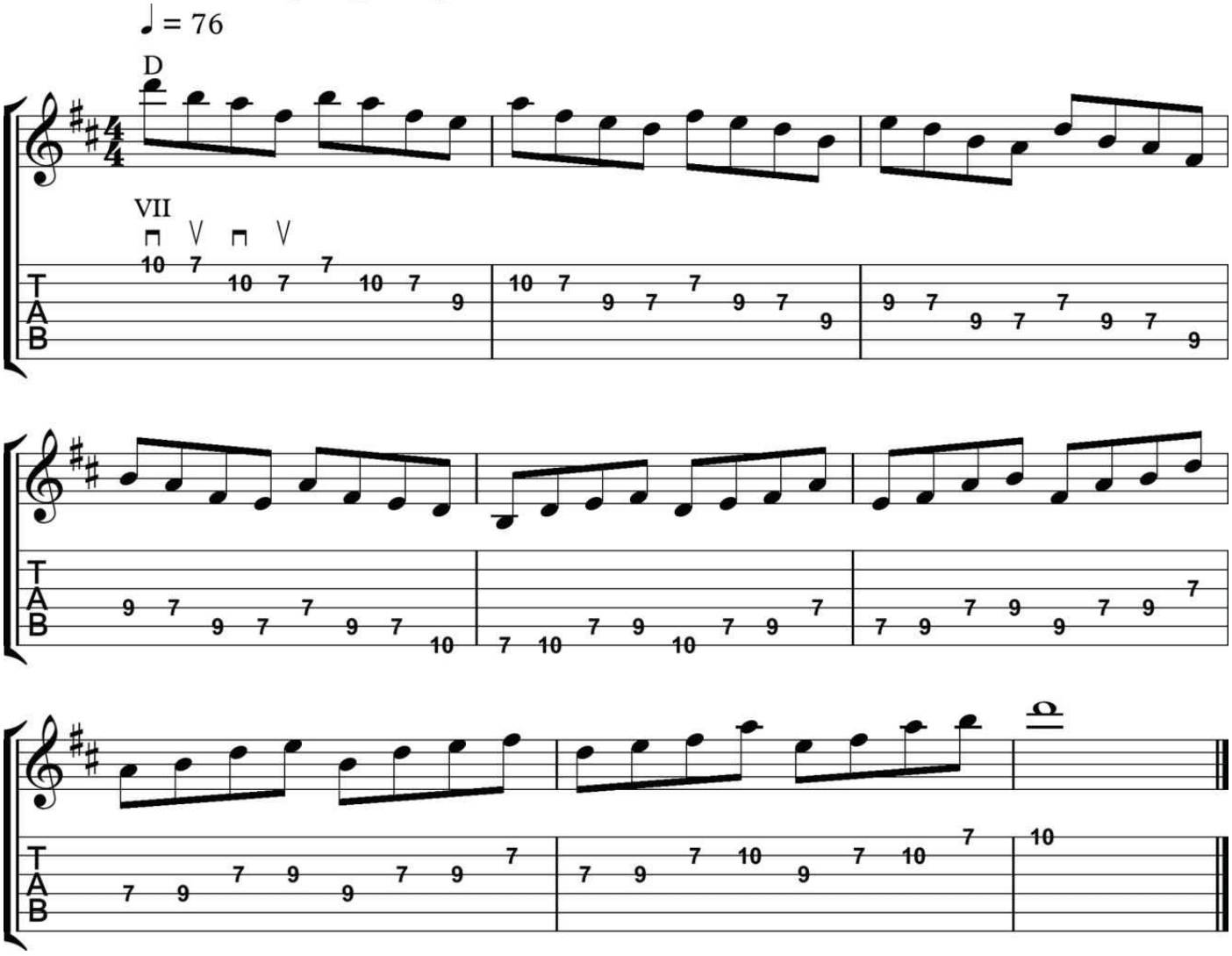
Here are three similar scale patterns applied to the major pentatonic scale. Each of these patterns uses the D major pentatonic scale.



Playing Maj Pent E4 in Pattern, Exercise 2

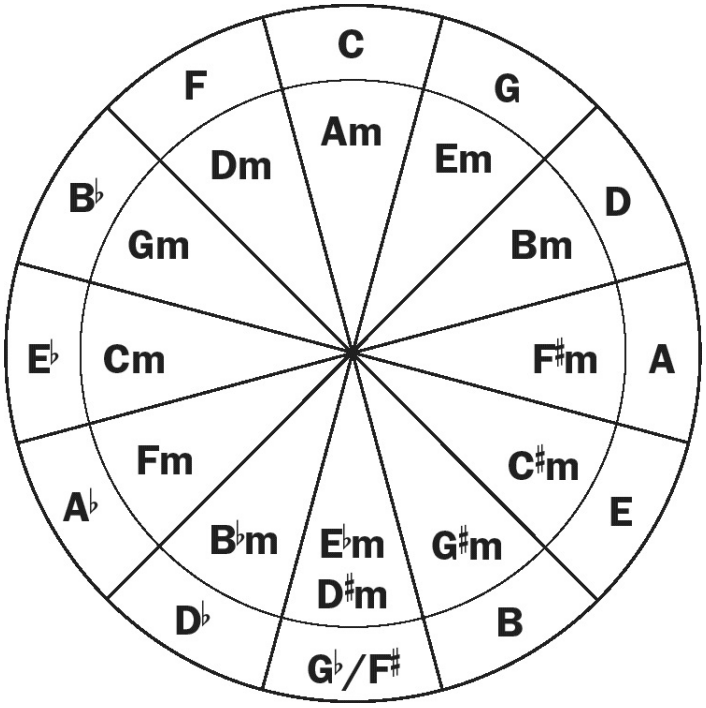


Playing Maj Pent E4 in Pattern, Exercise 3



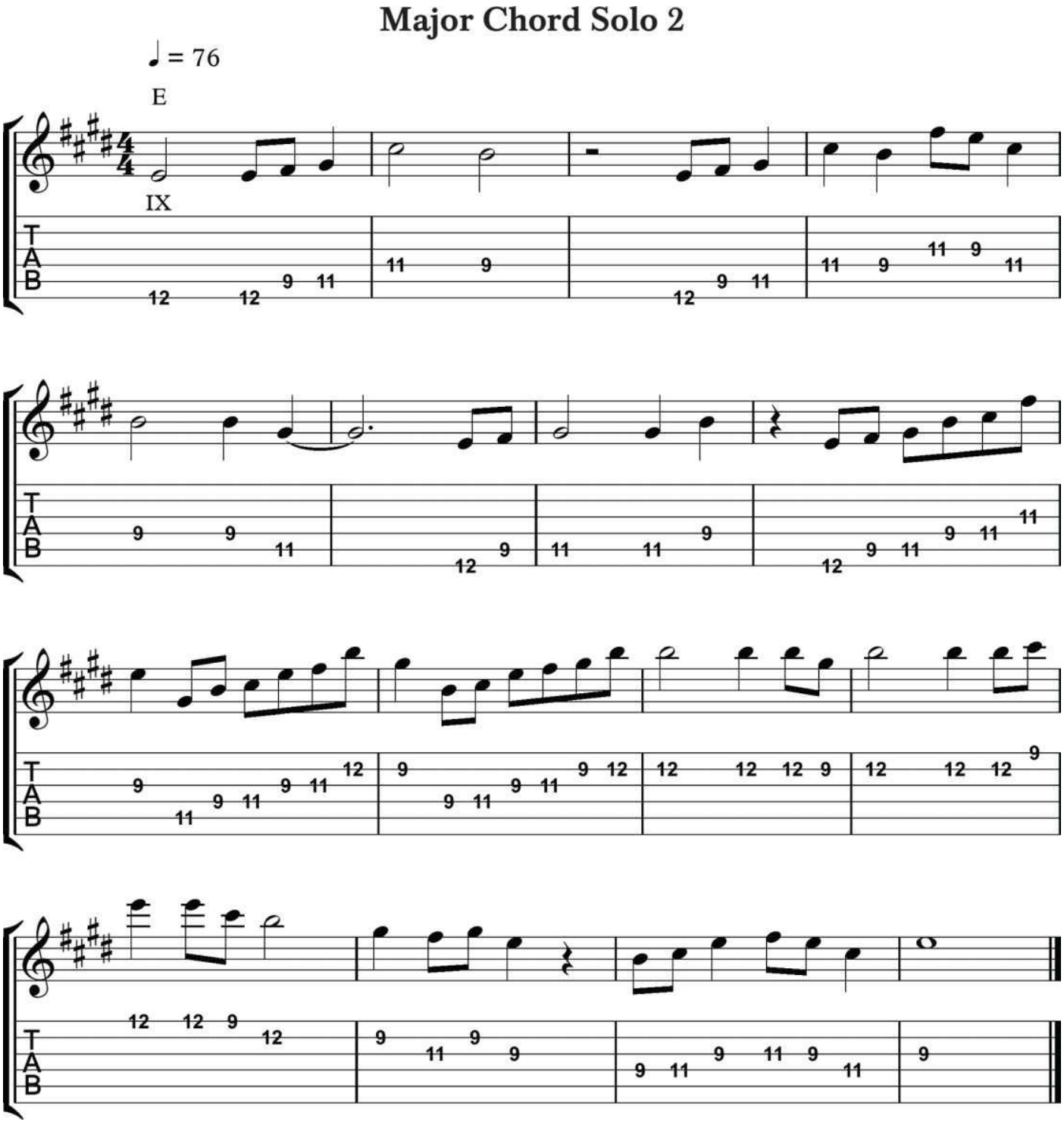
Now take these major pentatonic scale patterns and move them around the circle of fifths so that they may be applied to every major pentatonic scale. Leave one measure of rest

between each scale to give yourself time to move to the next appropriate hand position. Remember, all of the major keys are listed on the outside of the circle.

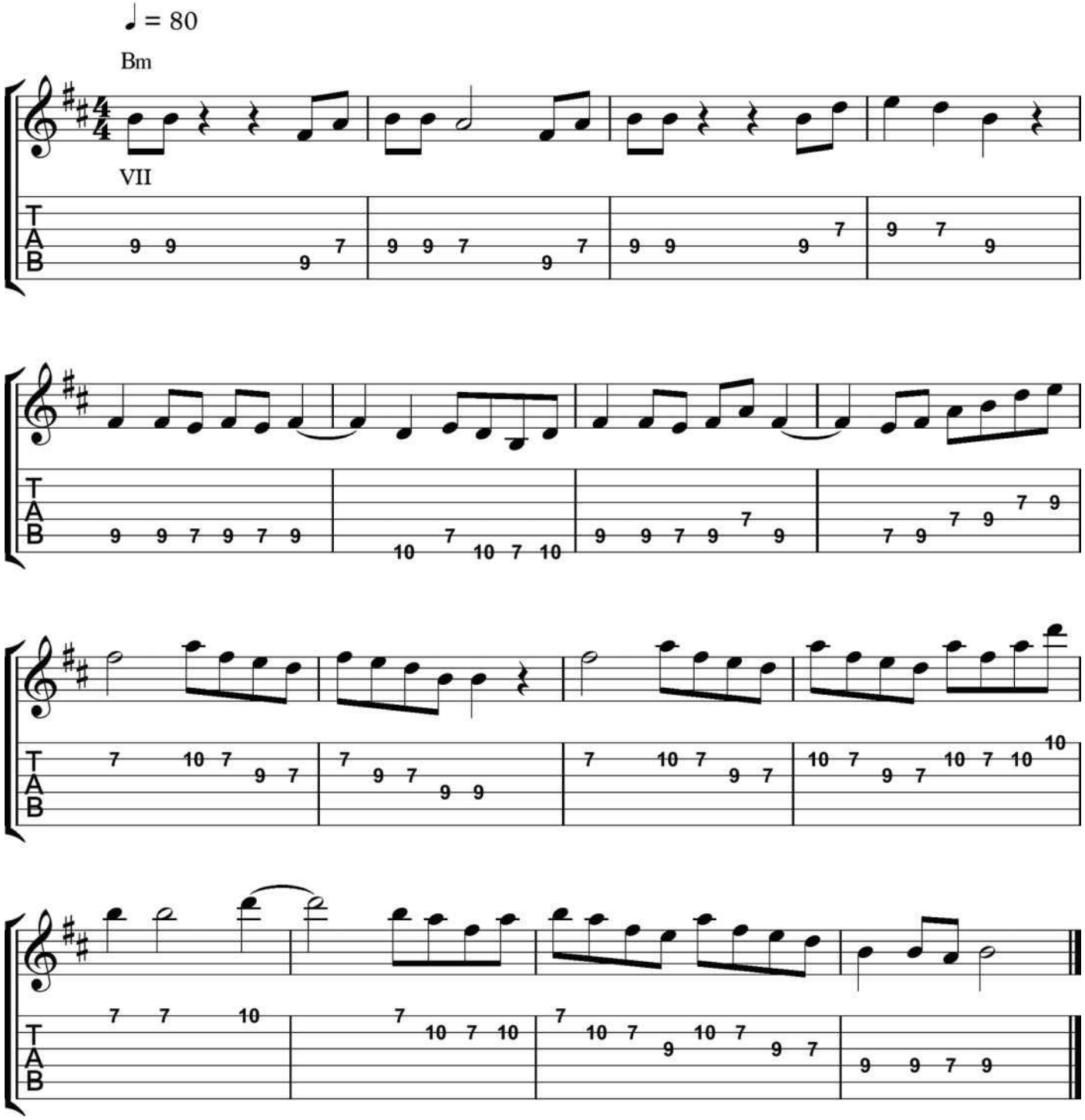


Part 4: Improvising With Motifs

Below are two new solos — one over a major chord and one over a minor chord. Each one includes elements of rhythmic variation, incorporates eighth notes, and contains numerous rhythmic and melodic motifs that will all-together make each one an interesting solo to play and listen to. Unlike the previous solos, these will not always contain consecutive notes that will stay in scale sequence, but may instead skip over notes (similar to some patterns in Part 3) to give a more interesting sound.



Minor Chord Solo 2



Chapter 5

Improvising Over Chord Progressions

Although it can now be understood how to improvise over a single major or minor chord, it is not very common for songs to contain only one chord. More often, songs will contain a sequence of chords called a ***chord progression***. Chord progressions are sometimes played in repetition throughout an entire song, or may only be used for a particular section of a song.

Part 1: Minor Chord Progressions

We will first examine how to play over chord progressions that use all minor chords, while moving the Minor Pentatonic Scale Shape E1 to the appropriate position for each chord. This will involve much movement back and forth on the neck of the guitar, similar to playing around the circle of fifths.

When preparing to improvise over an unfamiliar chord progression using one pentatonic scale shape, it is best to follow the Three-Step Method below to get comfortable with where you will be playing your scales.

Three-Step Method

Step 1: Play the Roots

- Using half notes, play the low roots of the pentatonic scale shapes through the chord progression, using the appropriate fingering that fits the scale.
- Using half notes, play the high roots of the pentatonic scale shapes through the chord progression, using the appropriate fingering that fits the scale.
- Leave two beats of rest between each chord for moving your hand position.

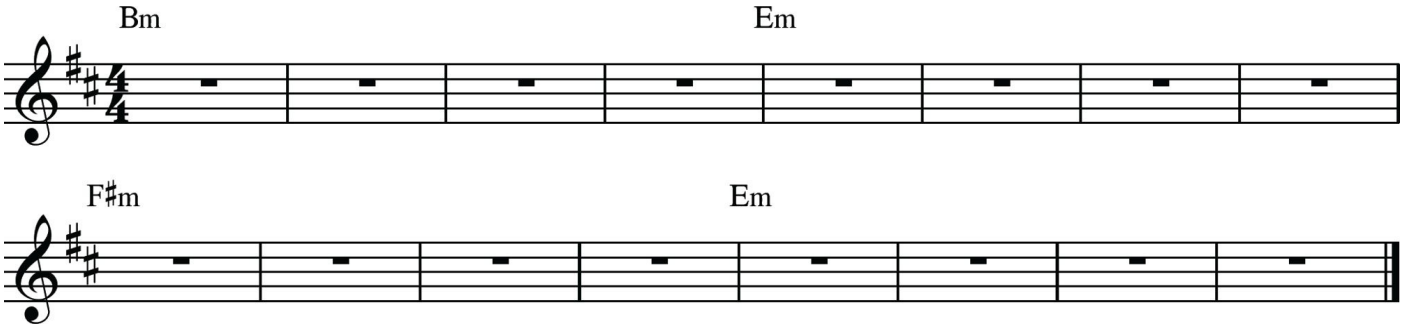
Step 2: Play the Scales

- Using eighth notes, play the pentatonic scales through the chord progression by starting and ending each scale on low roots.
- Using eighth notes, play the pentatonic scales through the chord progression by starting and ending each scale on high roots.
- Leave two beats of rest at the end of each scale for moving your hand position.

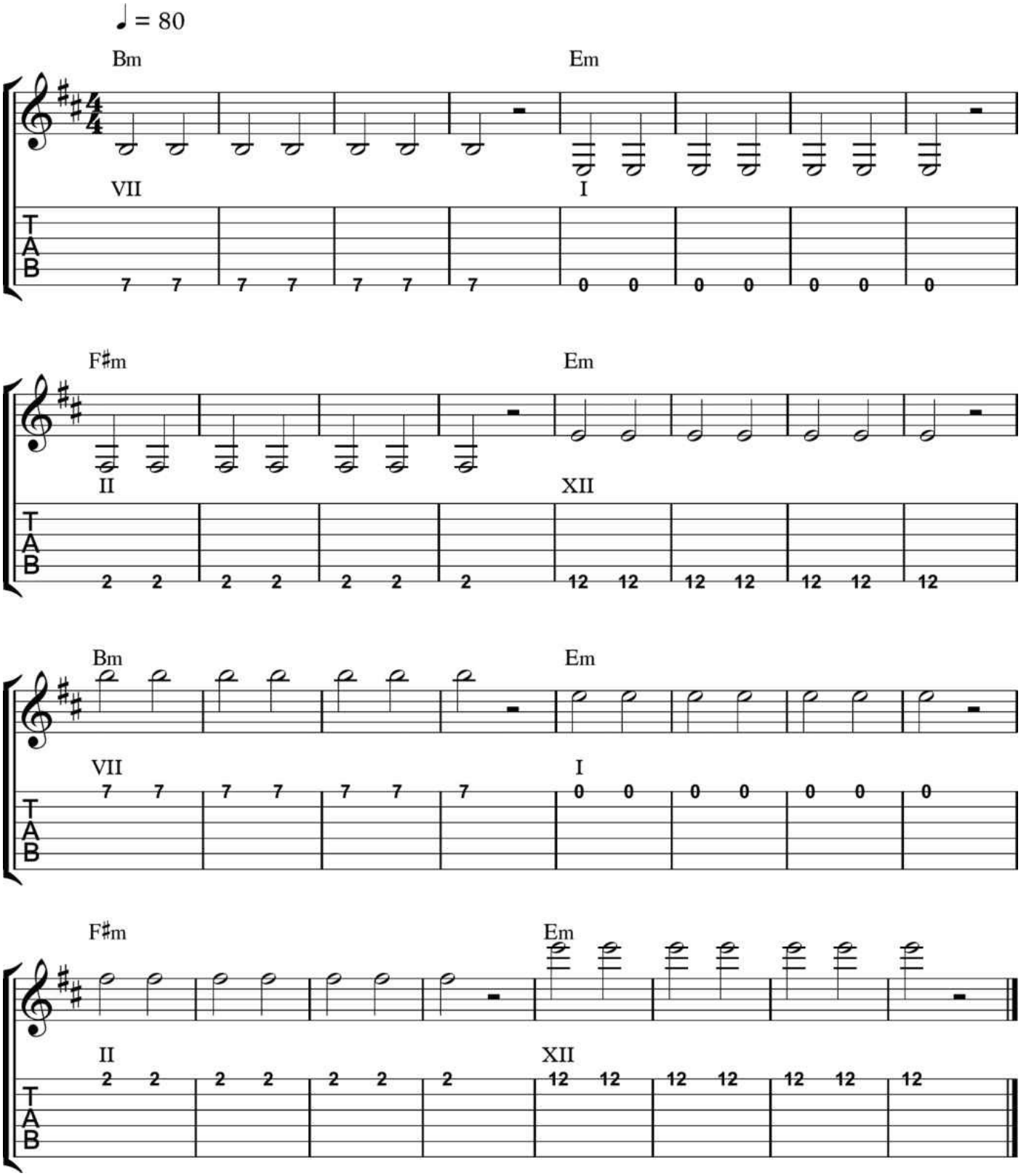
Step 3: Improvise Over the Chord Progression

- Improvise a solo over the chord progression at least two times.
- Think ahead to keep track of when the chords are about to switch.
- Use rhythmic and melodic motifs.

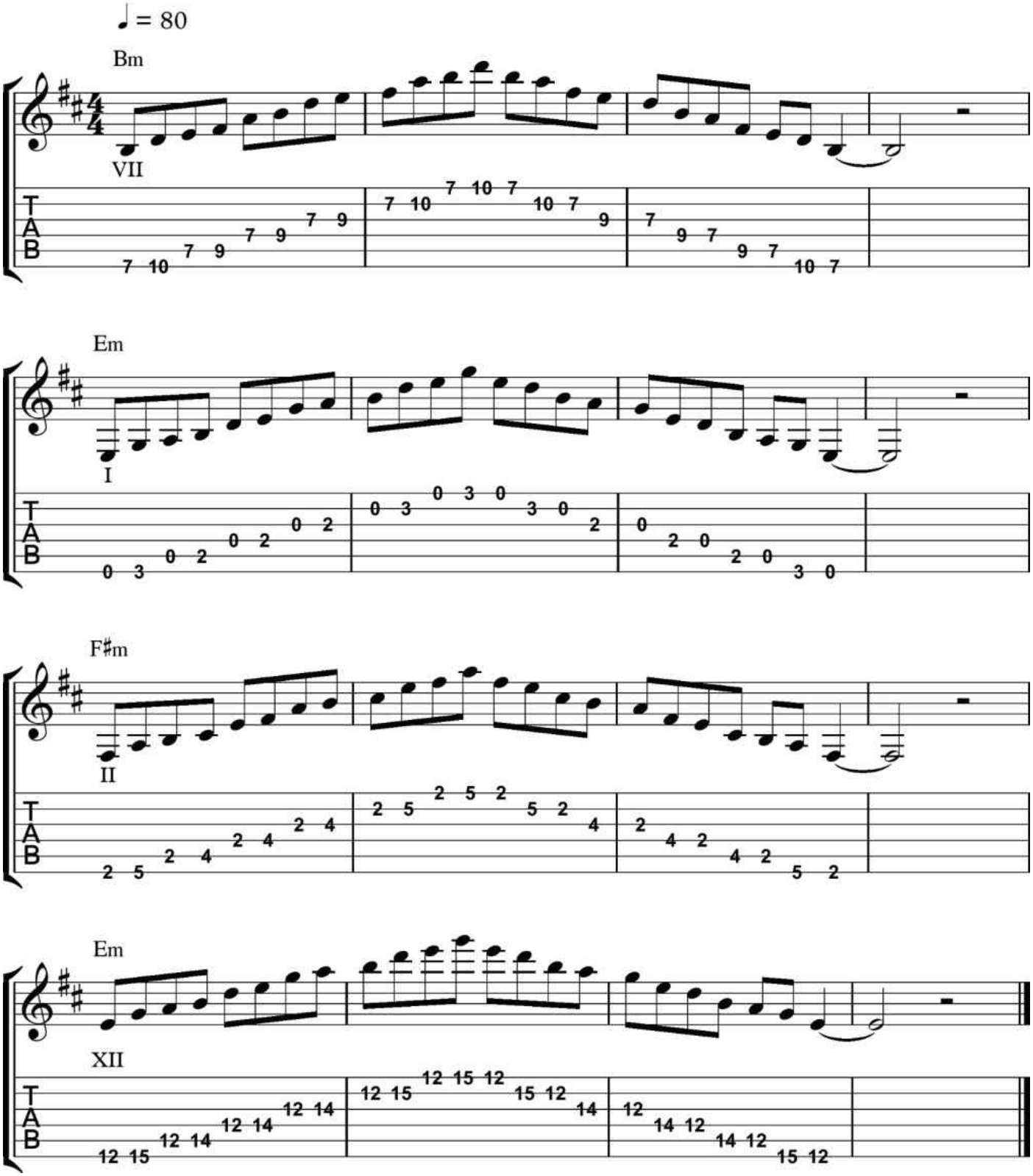
This step-by-step approach will now be applied to the following minor chord progression in order to illustrate each step and show its effectiveness. Each chord has a duration of four measures. Since the E minor pentatonic scale used in this chord progression can be played in two places (at 1st position using open strings, and at 12th position), the following exercises will use both available positions.



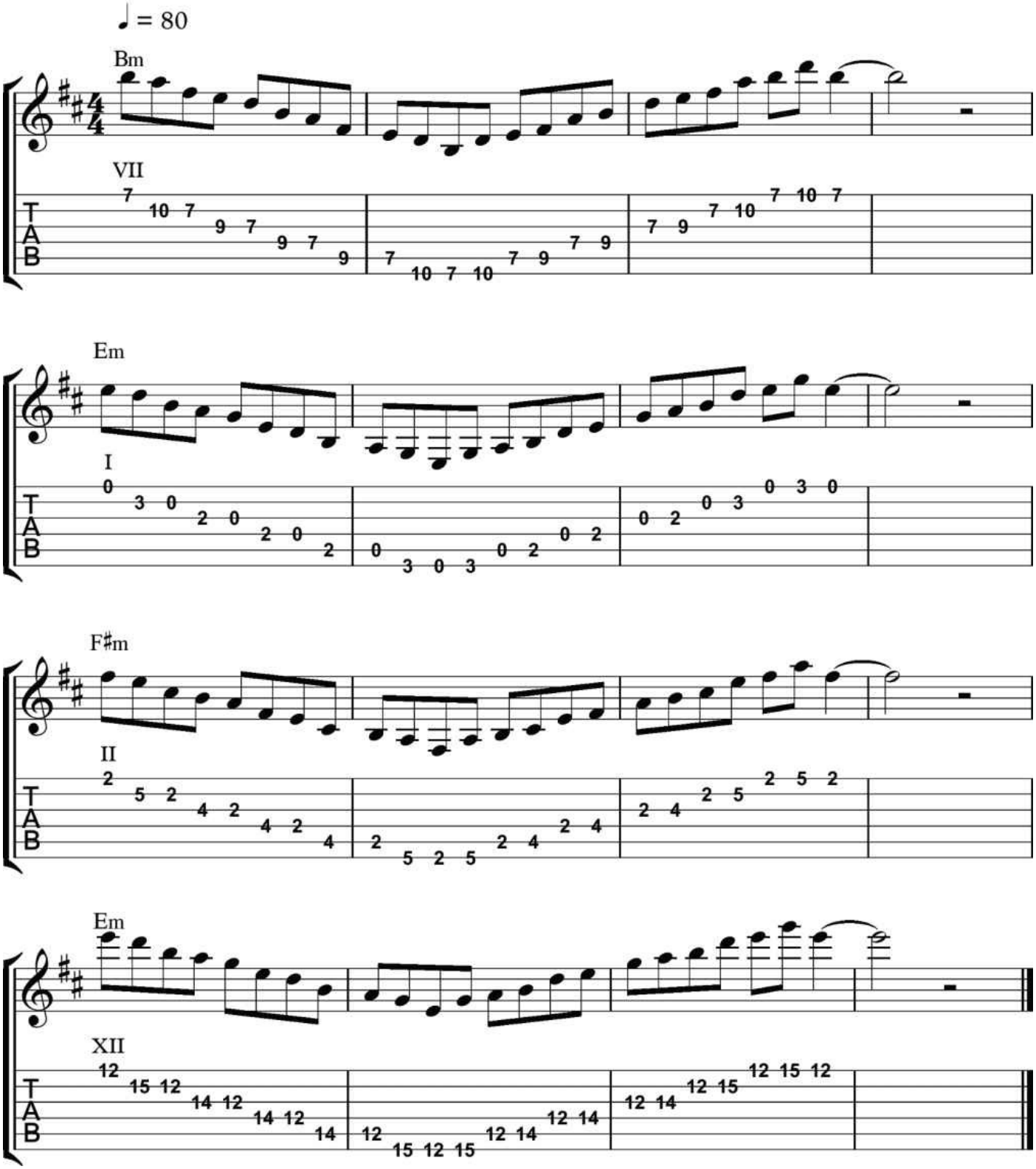
Step 1: Play the Roots
(low and high)



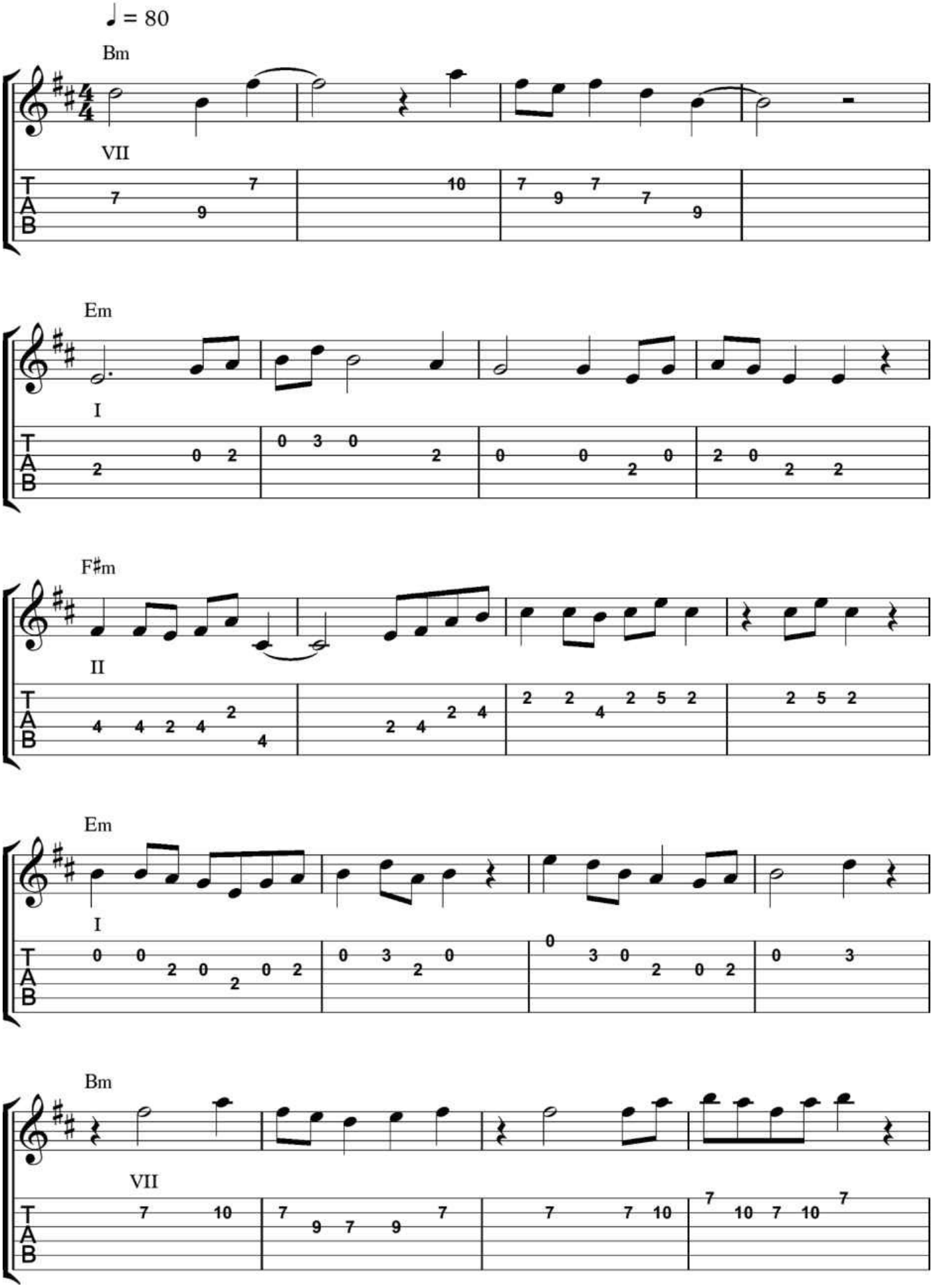
Step 2: Play the Scales
(starting from low roots)

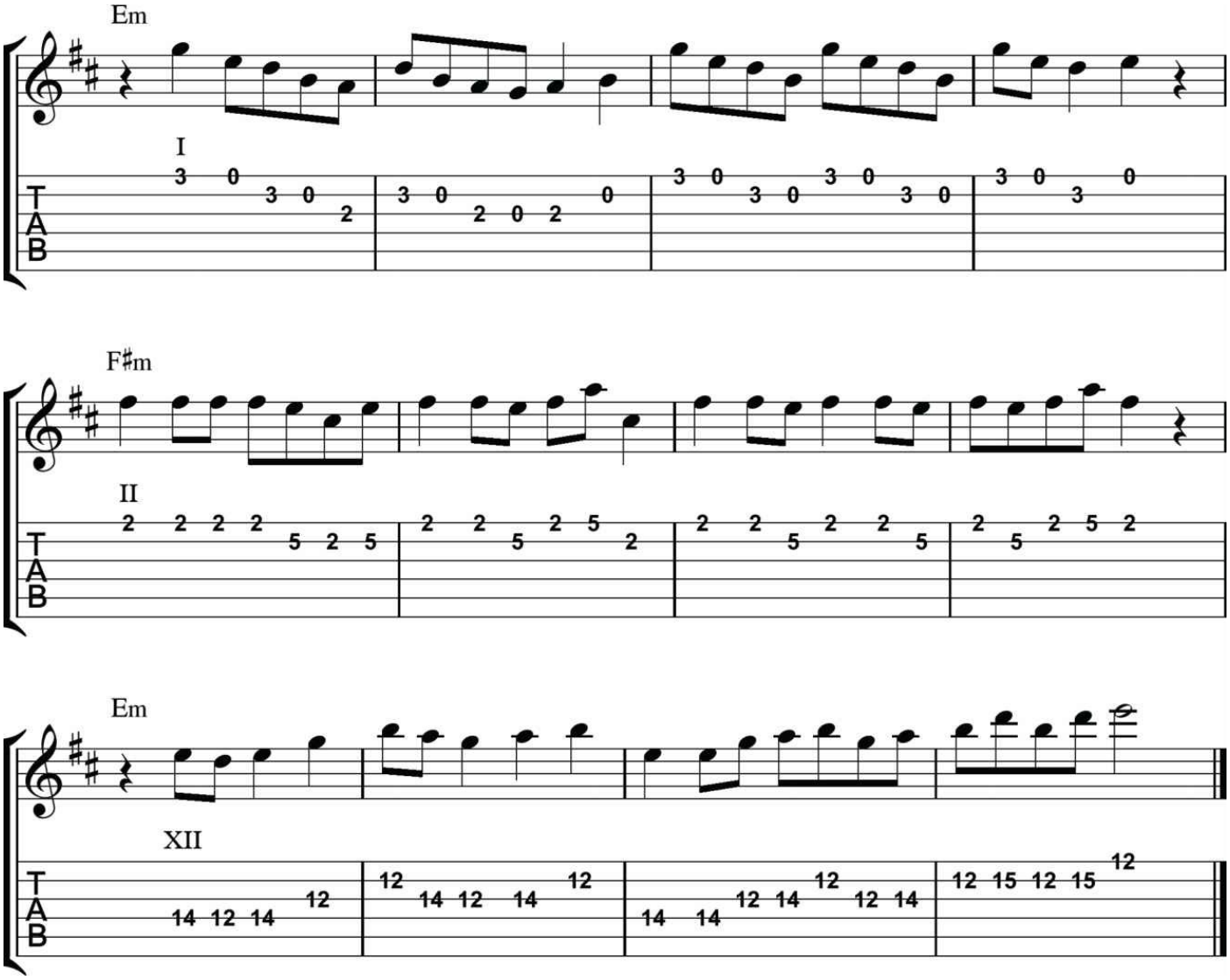


Step 2: Play the Scales
(starting from high roots)



Step 3: Improvise Over the Chord Progression



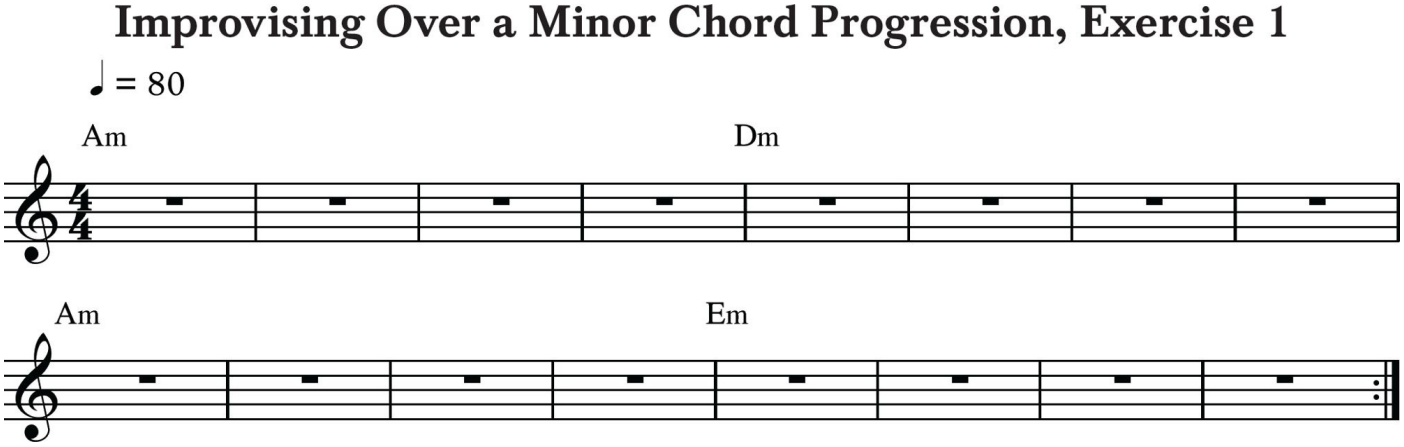


Now try applying this Three-Step Method to the following minor chord progressions. Work on each one until you can comfortably improvise over it. Each one gets a bit faster, so playing them in order will be very helpful.

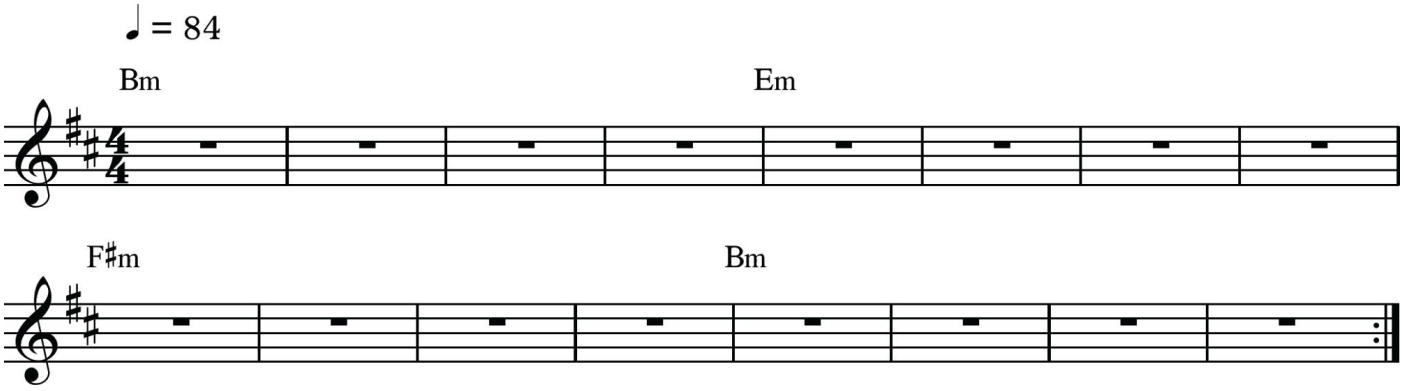
Step 1: Play the Roots (low and high)

Step 2: Play the Scales (starting from low roots and high roots)

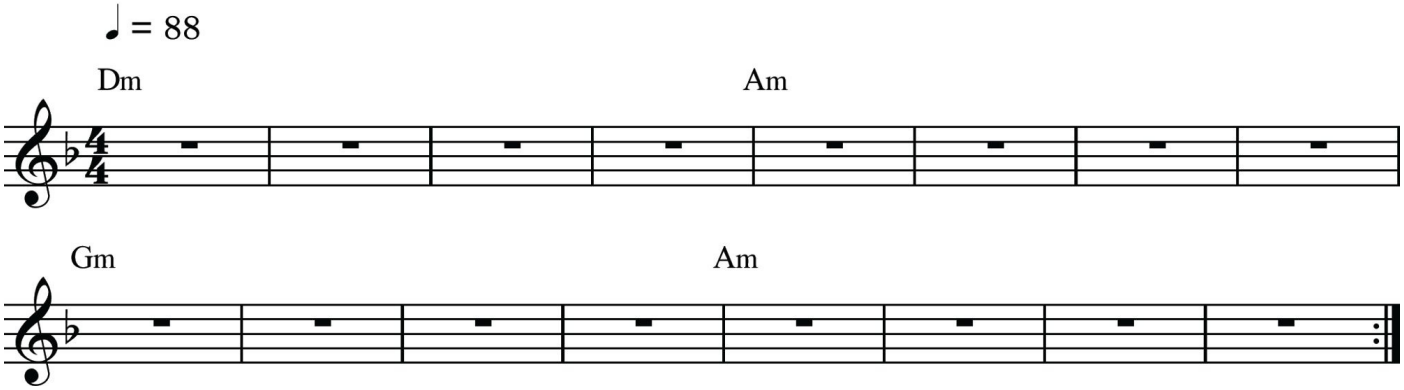
Step 3: Improvise Over the Chord Progression



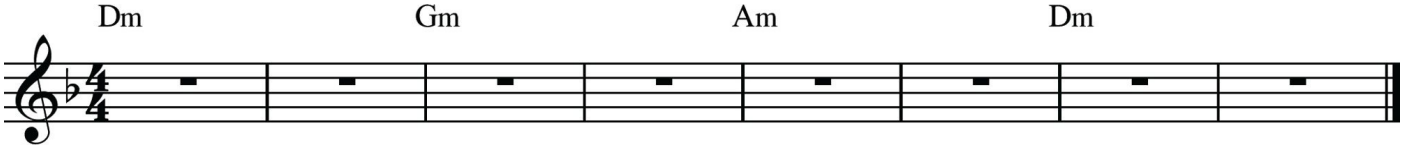
Improvising Over a Minor Chord Progression, Exercise 2



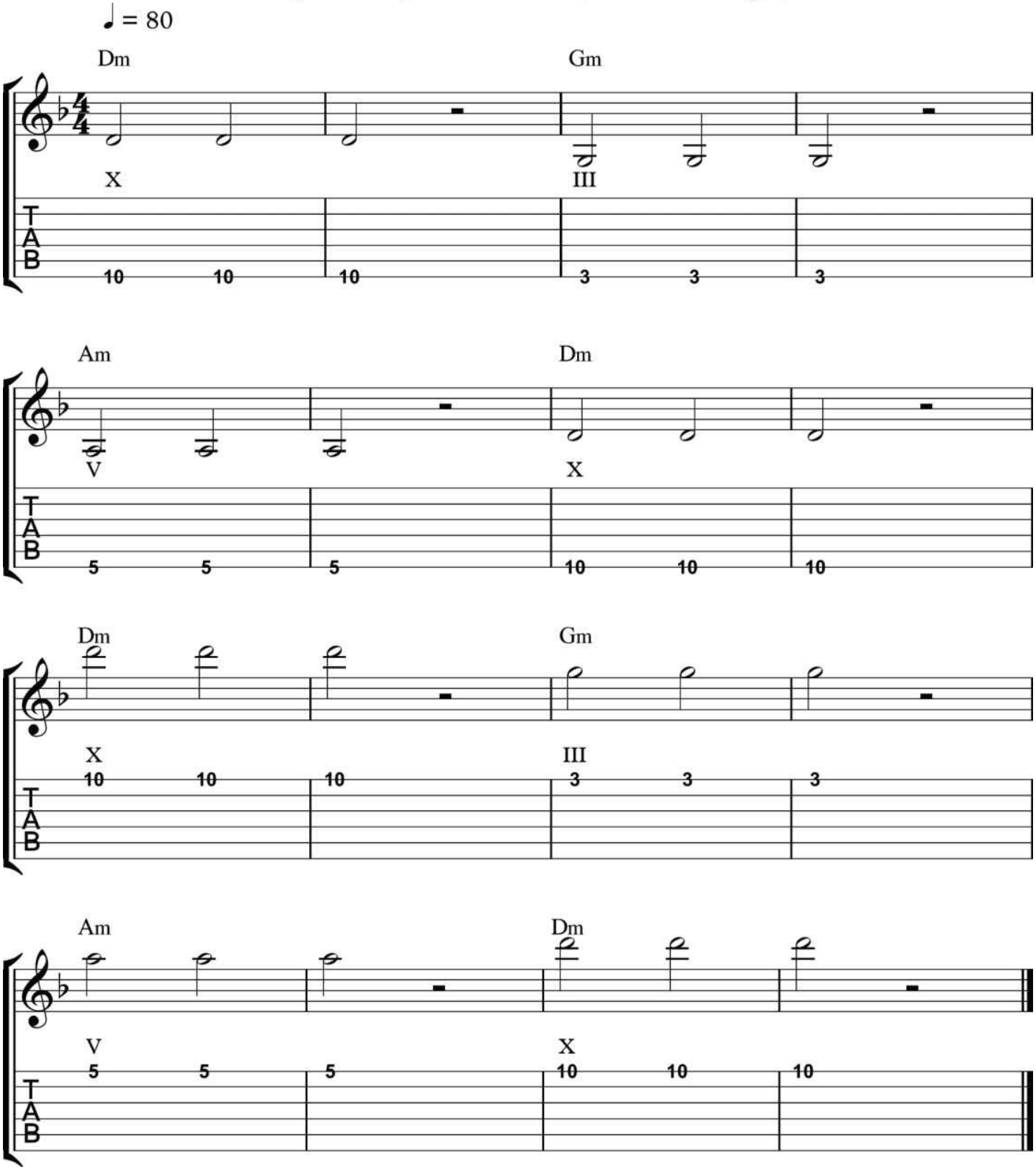
Improvising Over a Minor Chord Progression, Exercise 3



The chords within a chord progression will very often change more frequently than every four measures. In preparation for these instances, here is the same Three-Step Method applied to a minor chord progression with each chord having a duration of two measures. Hand positions will only be notated in Step 1, but should remain the same for Steps 2 and 3.

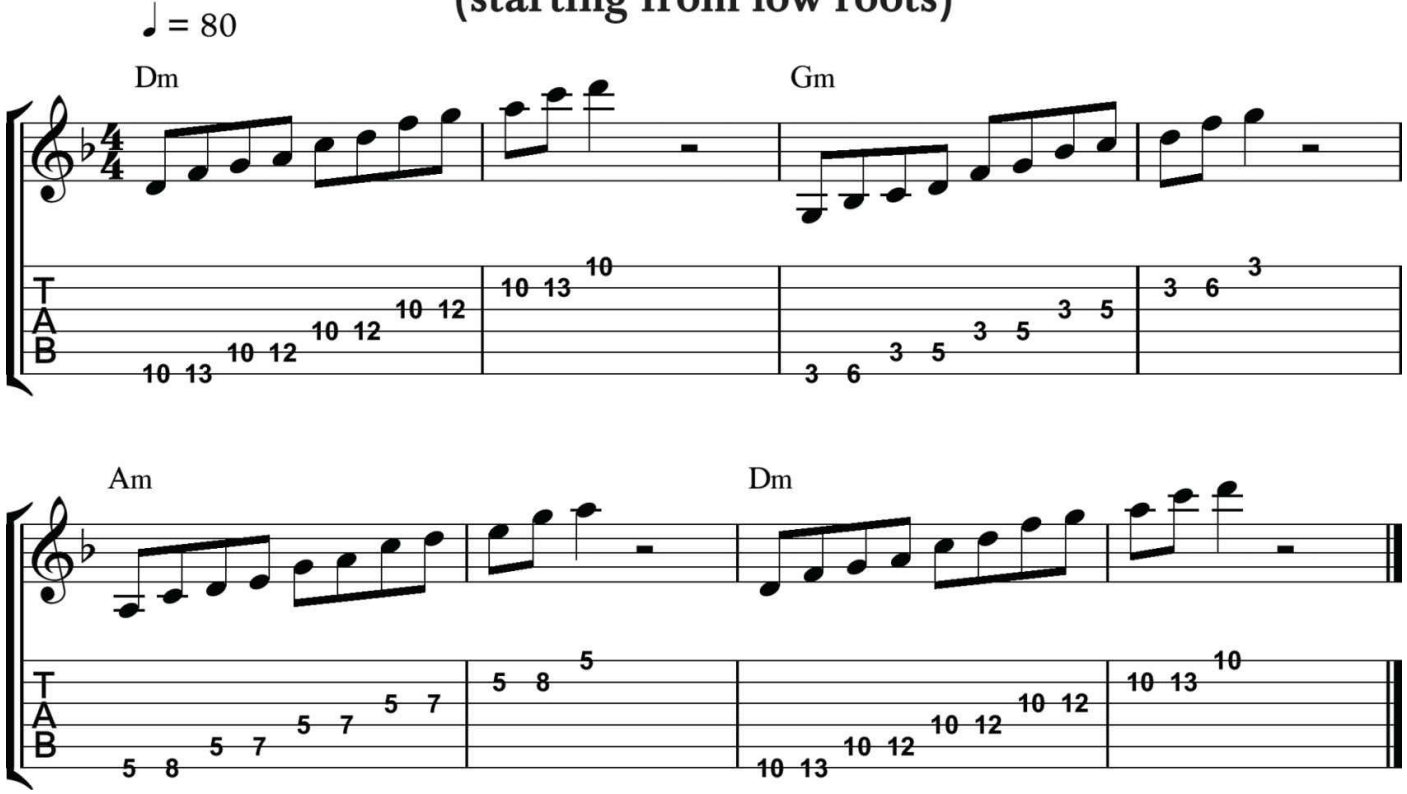


Step 1: Play the Roots (low and high)

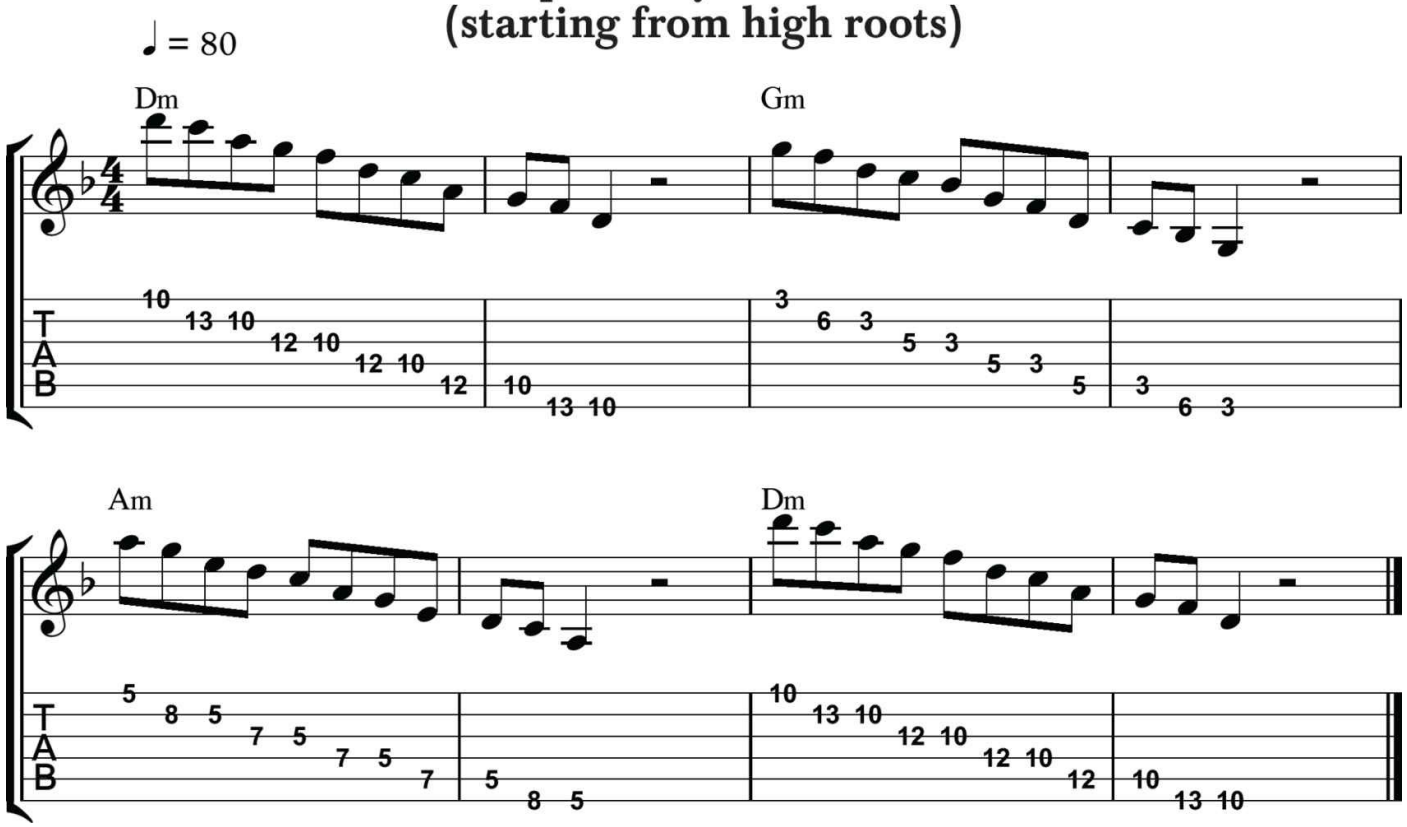


The scales in Step 2 are not able to start and end at the same low or high root because the chords only last for two measures. Therefore, continue to play the scales as you normally would, stopping on whichever note occurs on beat two.

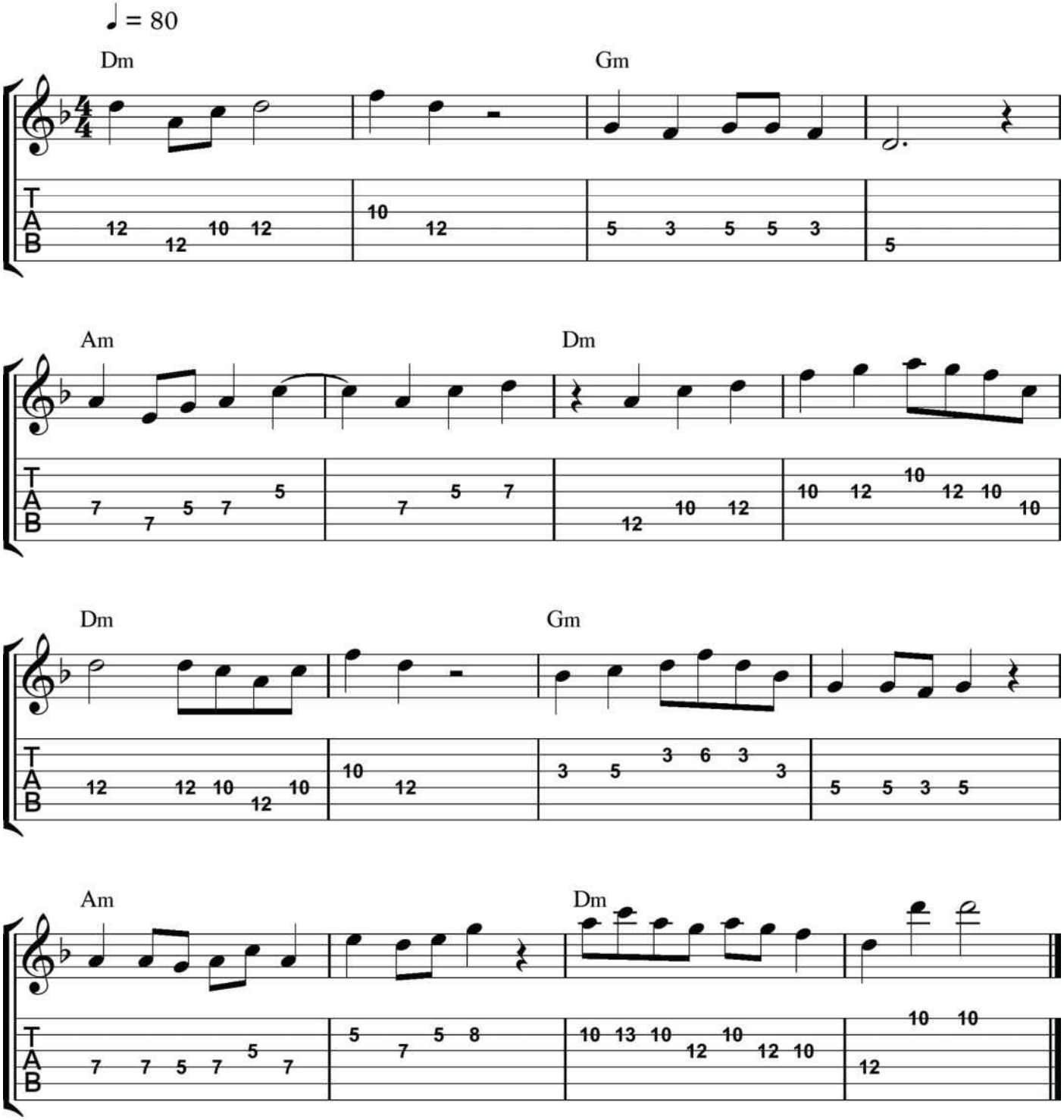
Step 2: Play the Scales
(starting from low roots)



Step 2: Play the Scales
(starting from high roots)



Step 3: Improvise Over the Chord Progression



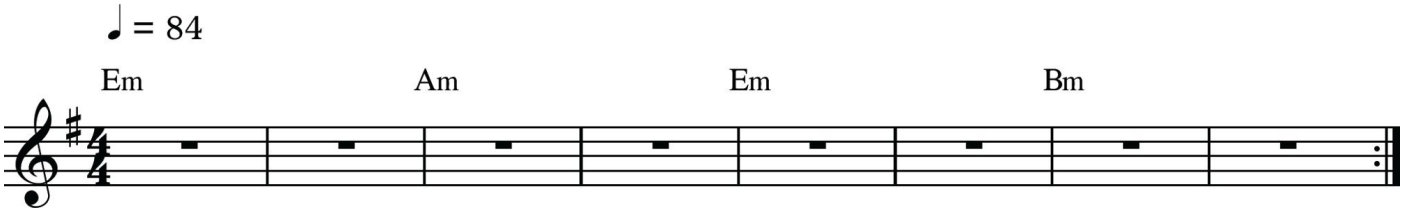
Now try applying this Three-Step Method to the following minor chord progressions. Work on each one until you can comfortably improvise over it. Because each chord only lasts for two measures, this may be more difficult than previous exercises and may require a bit more practice.

Step 1: Play the Roots (low and high)

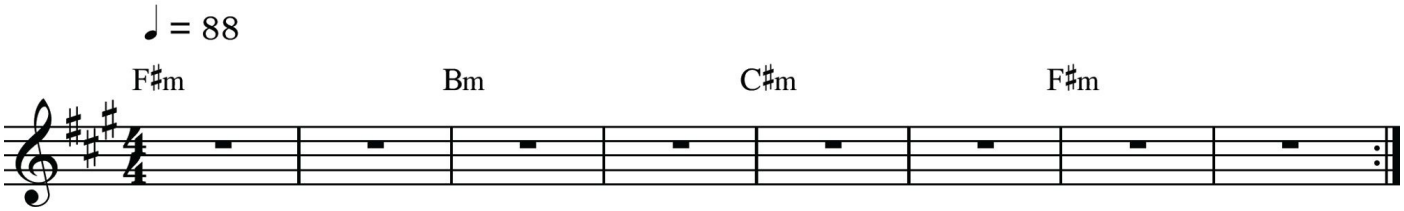
Step 2: Play the Scales (starting from low roots and high roots)

Step 3: Improvise Over the Chord Progression

Improvising Over a Minor Chord Progression, Exercise 4

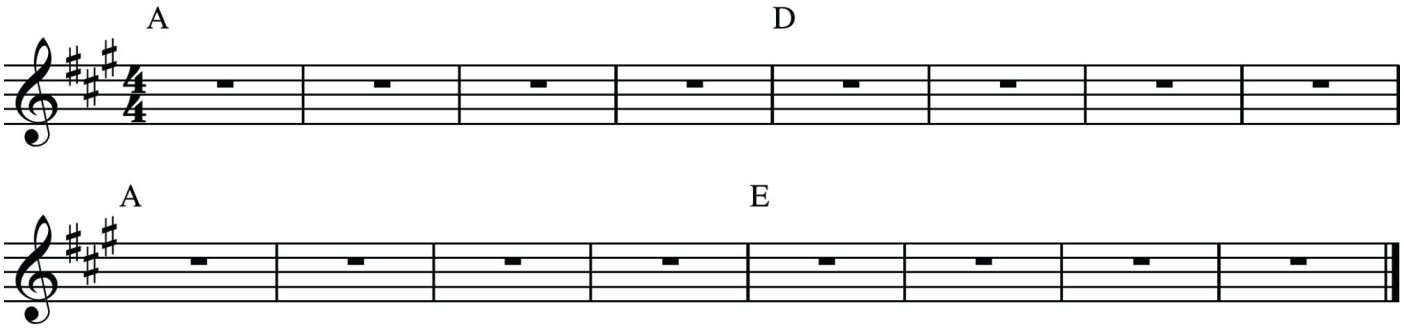


Improvising Over a Minor Chord Progression, Exercise 5

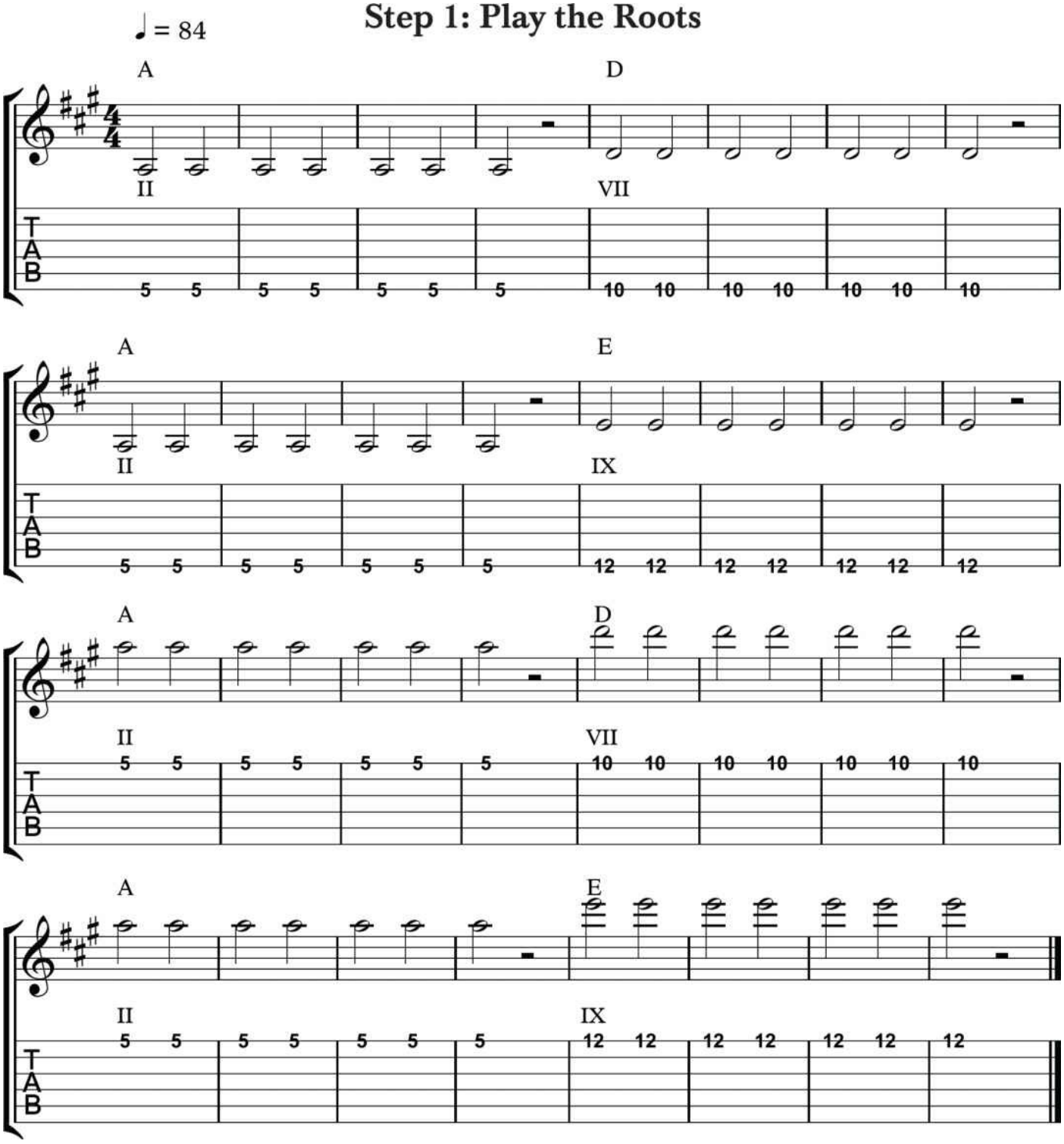


Part 2: Major Chord Progressions

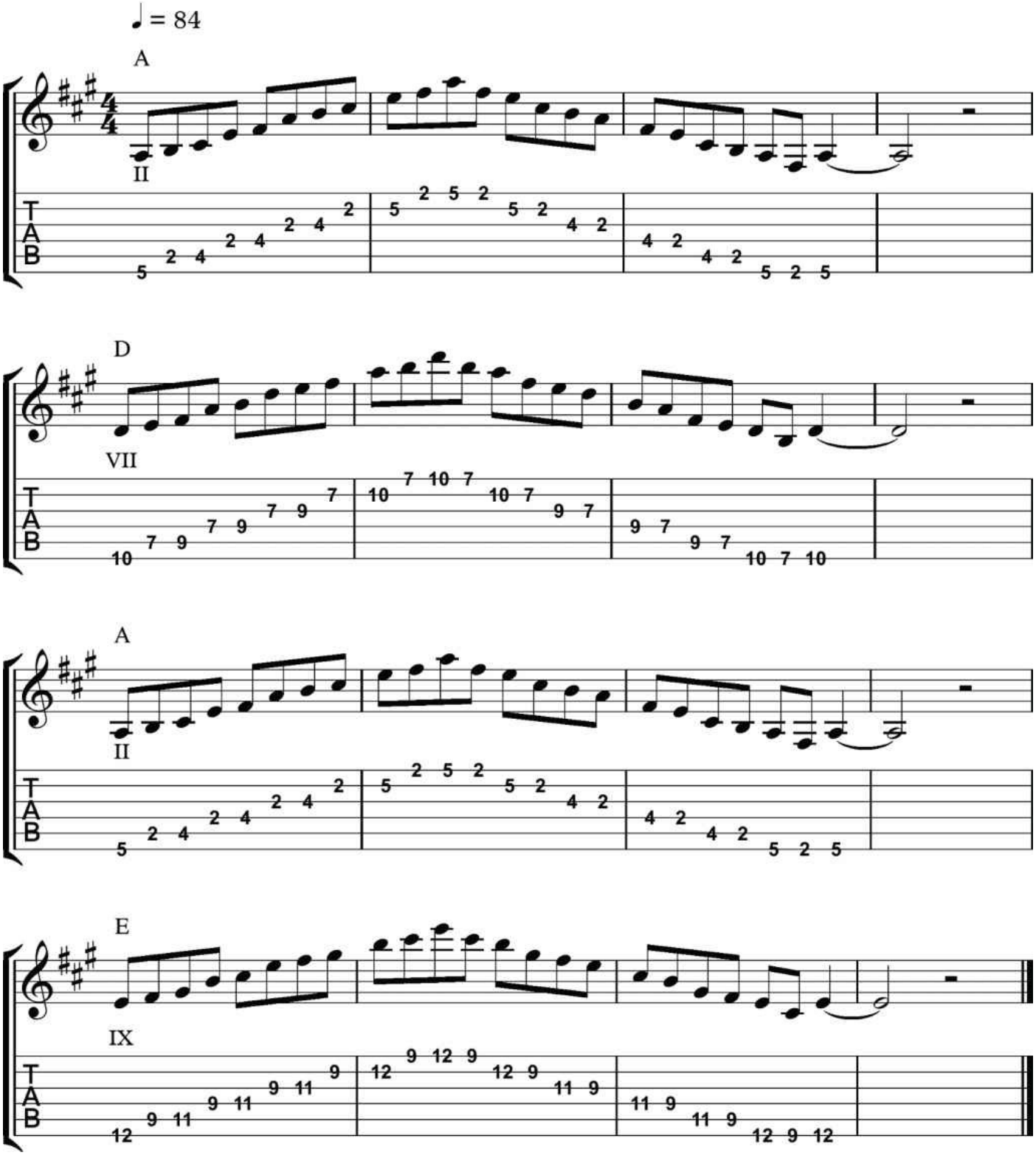
The Three-Step Method can also be used for playing over chord progressions that use all major chords, while moving Major Pentatonic Scale Shape E4 to the appropriate position for each chord. The same three steps will lead you to a clear understanding of where the scales are located within the chord progression.



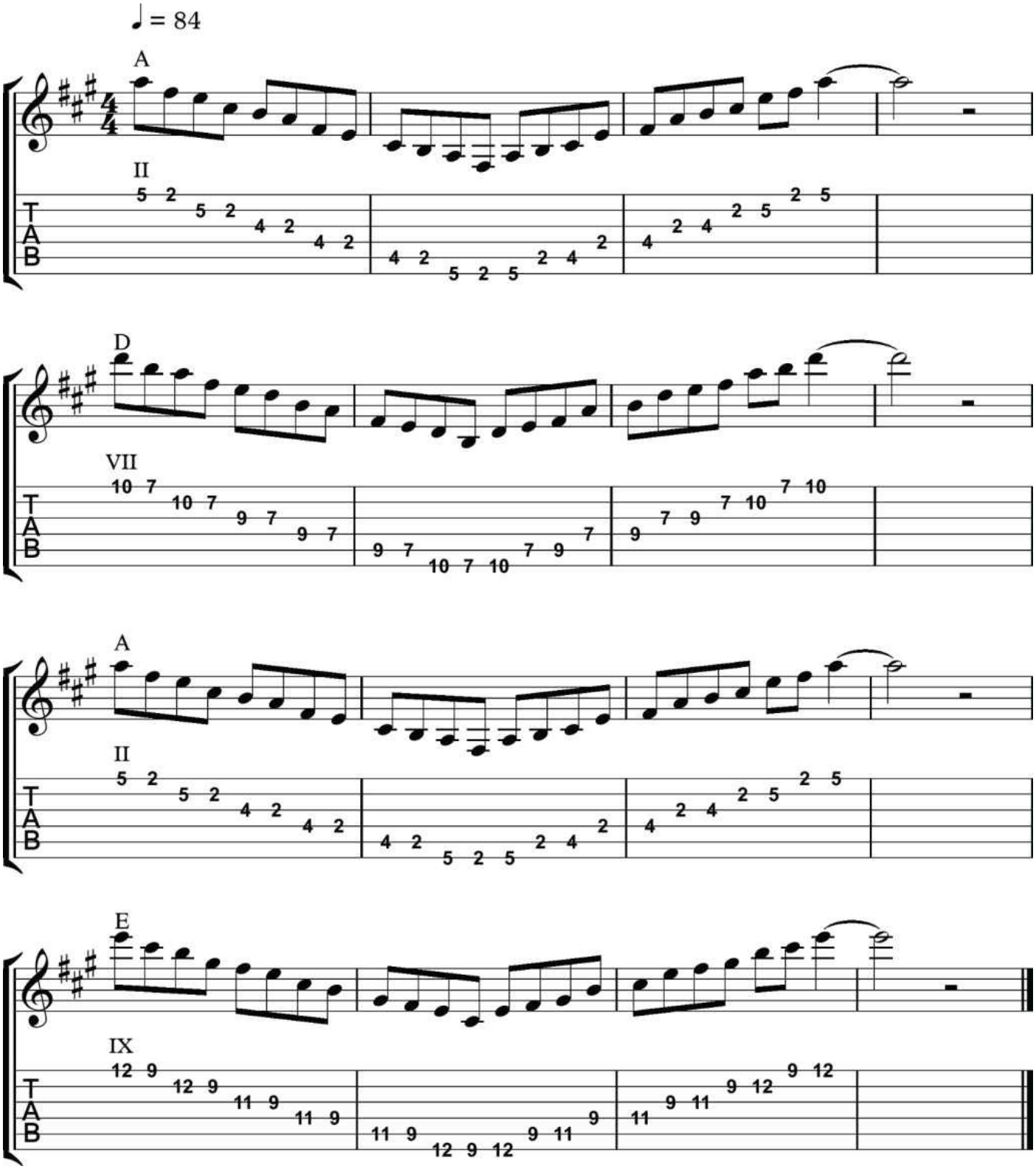
Step 1: Play the Roots



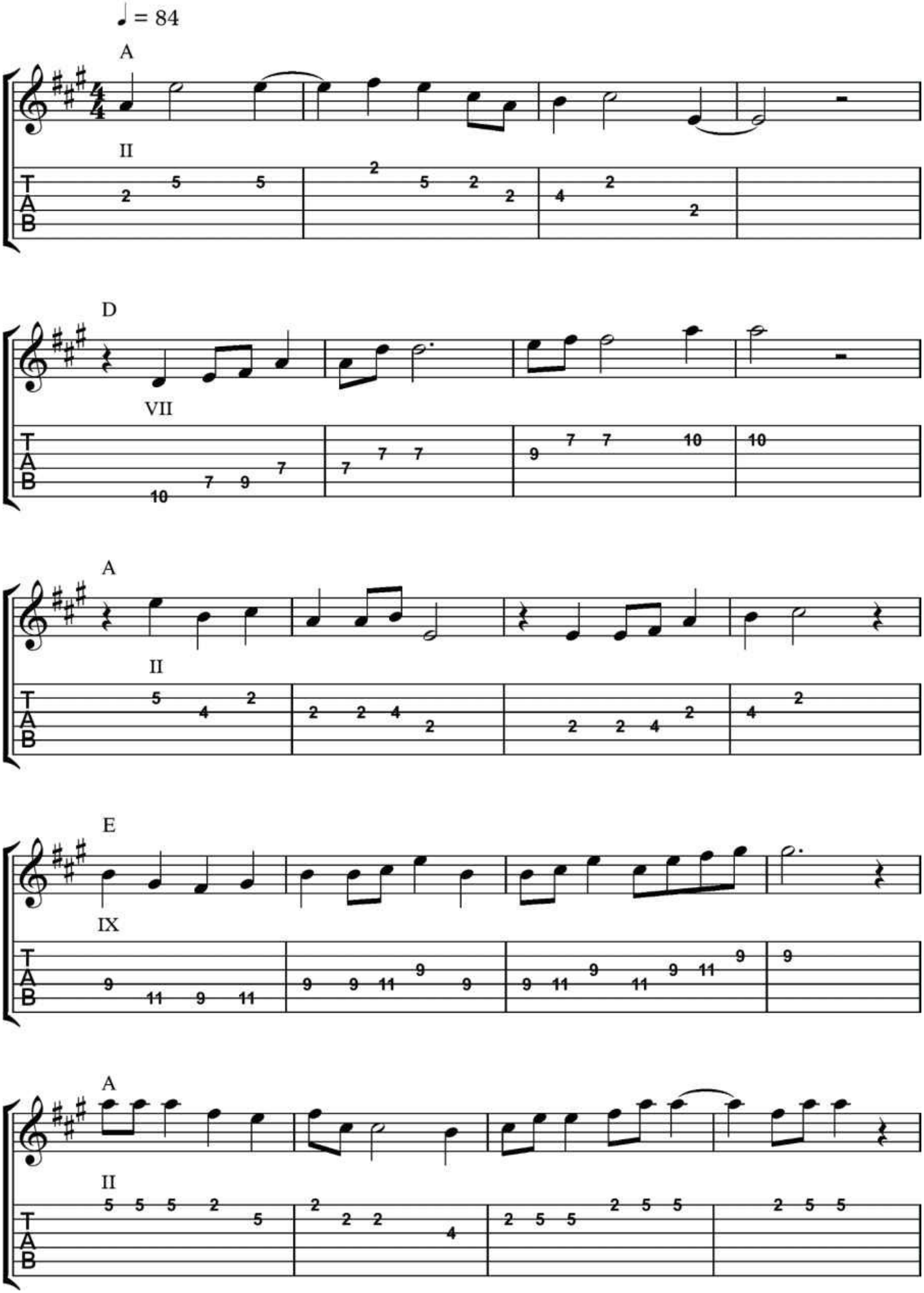
Step 2: Play the Scales
(starting from low roots)

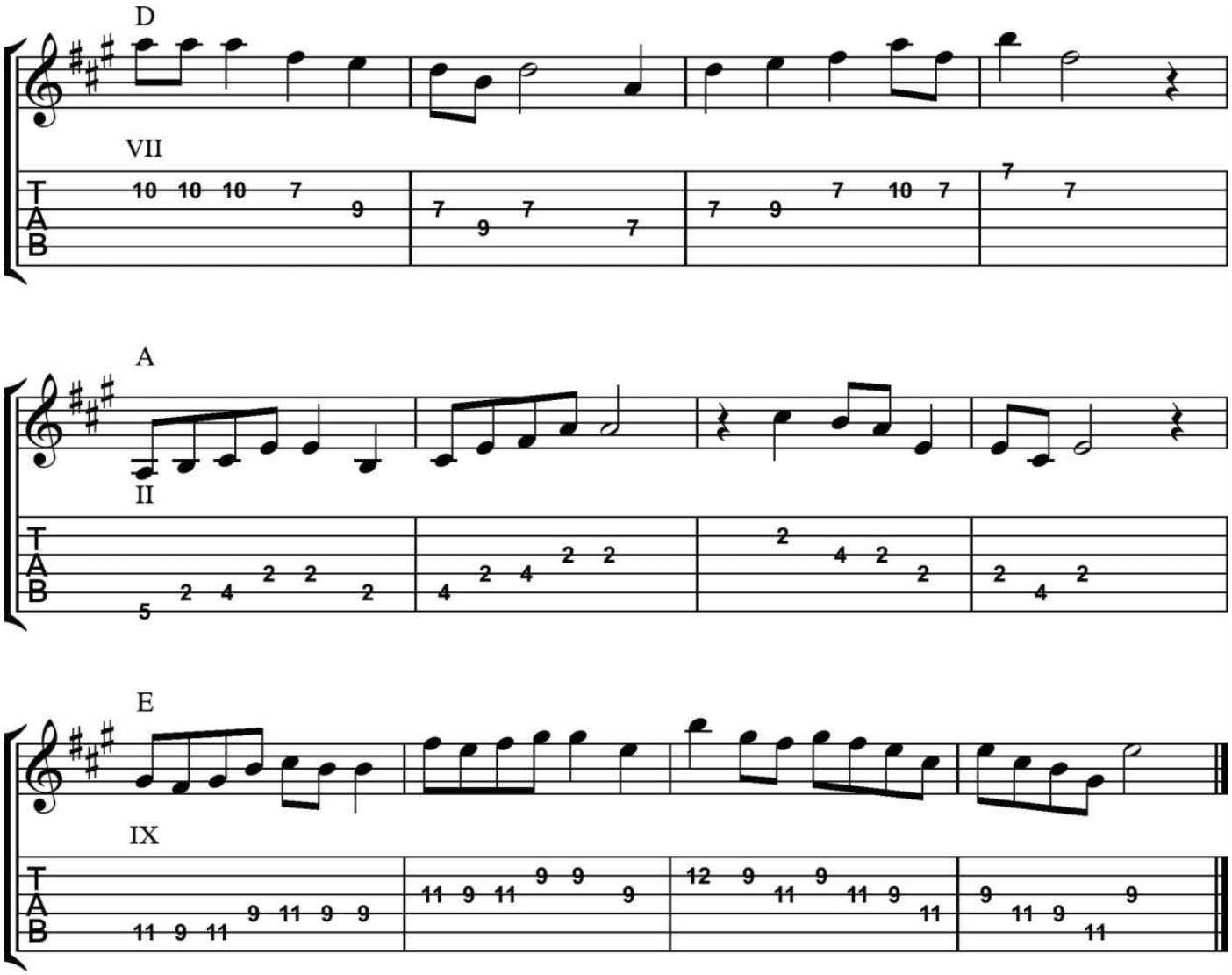


Step 2: Play the Scales
(starting from high roots)



Step 3: Improvise Over the Chord Progression





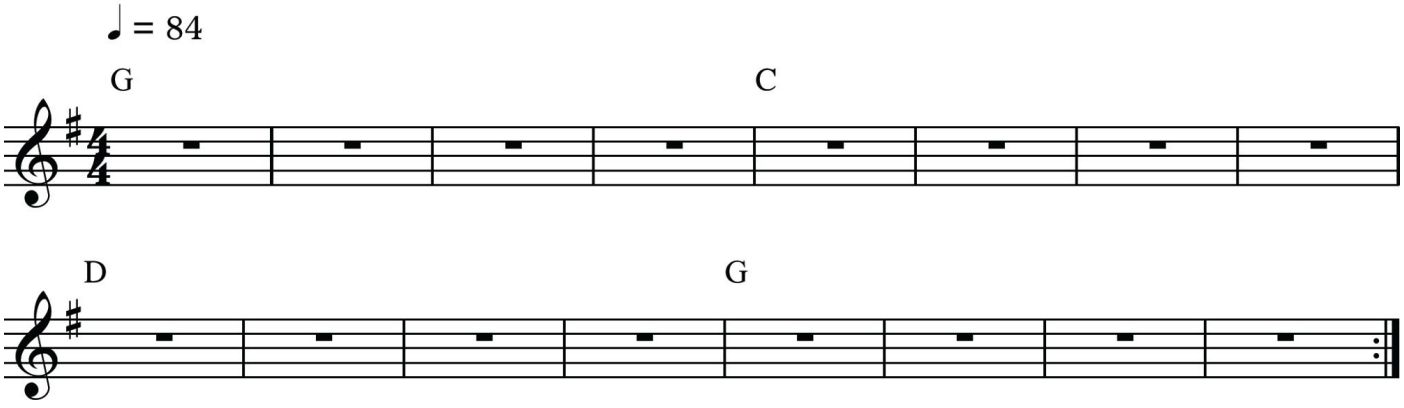
Now try applying this Three-Step Method to the following minor chord progressions. Work on each one until you can comfortably improvise over it. Each one gets a bit faster, so playing them in order will be very helpful.

Step 1: Play the Roots (low and high)

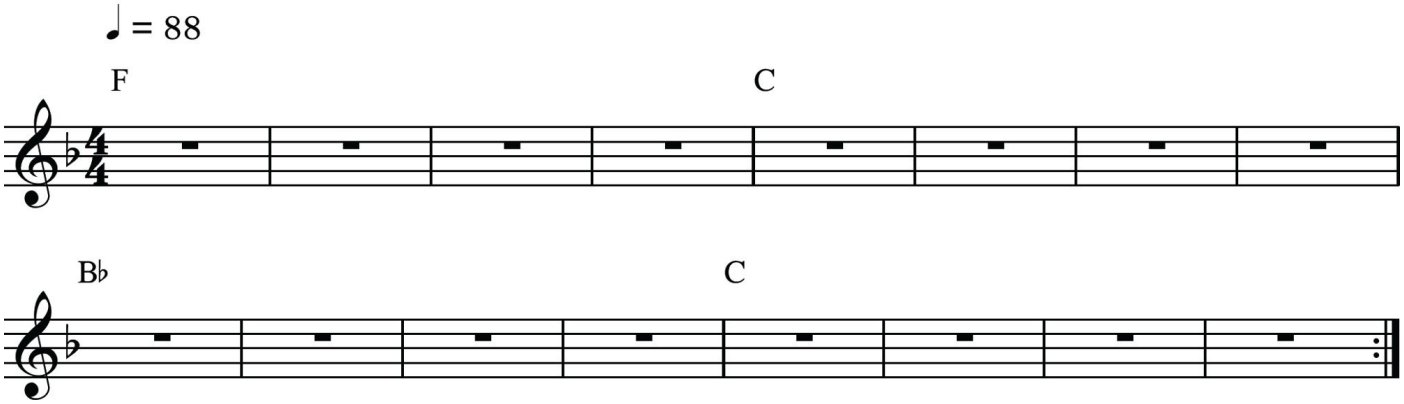
Step 2: Play the Scales (starting from low roots and high roots)

Step 3: Improvise Over the Chord Progression

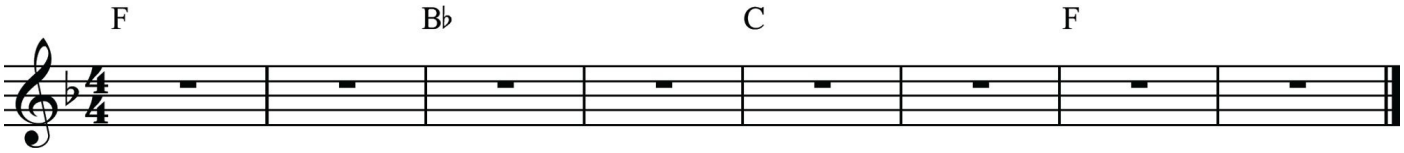
Improvising Over a Major Chord Progression, Exercise 1



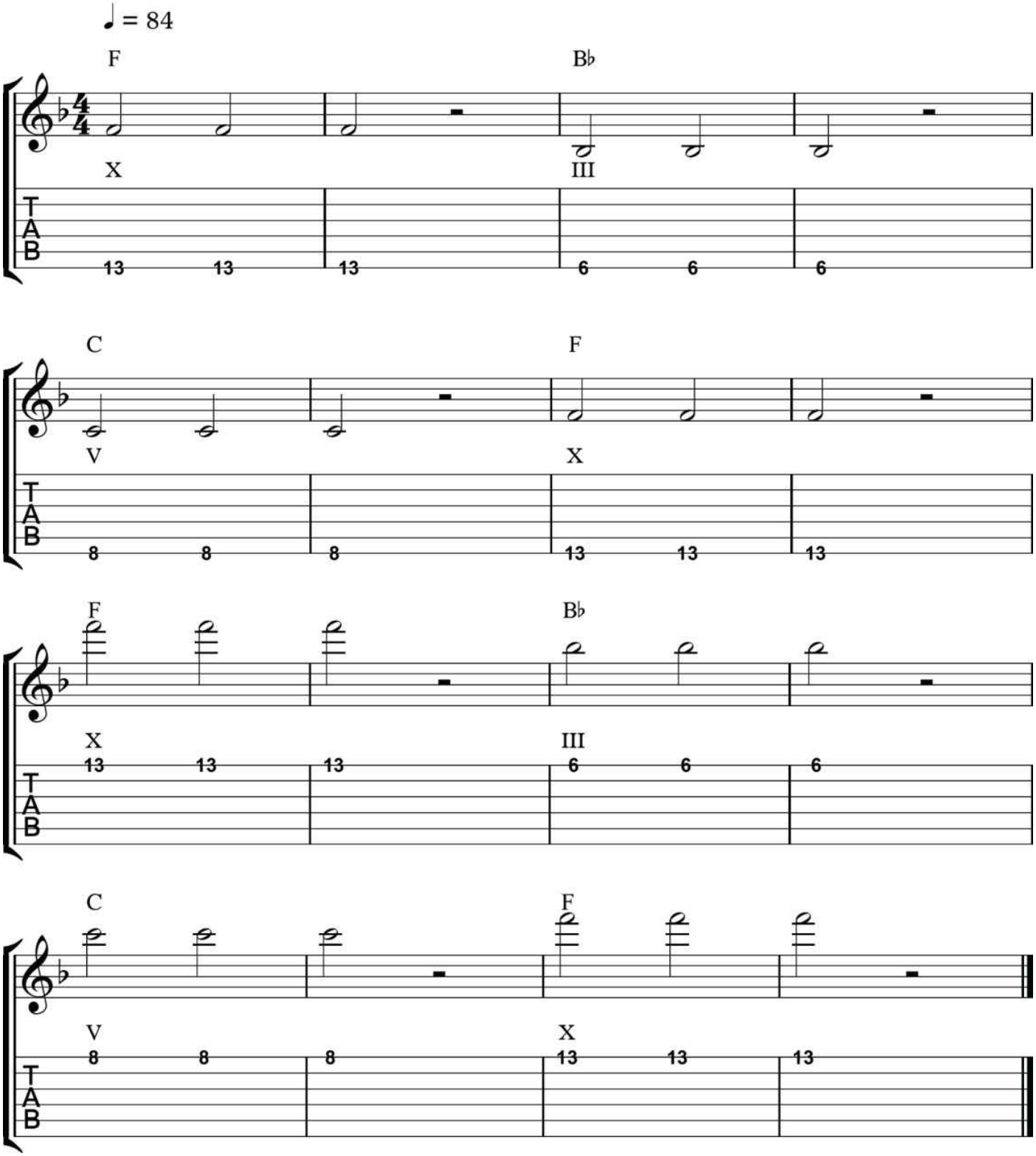
Improvising Over a Major Chord Progression, Exercise 2



Here is the same Three-Step Method applied to a major chord progression with each chord having a duration of two measures. Hand positions will only be notated in Step 1, but should remain the same in Steps 2 and 3.

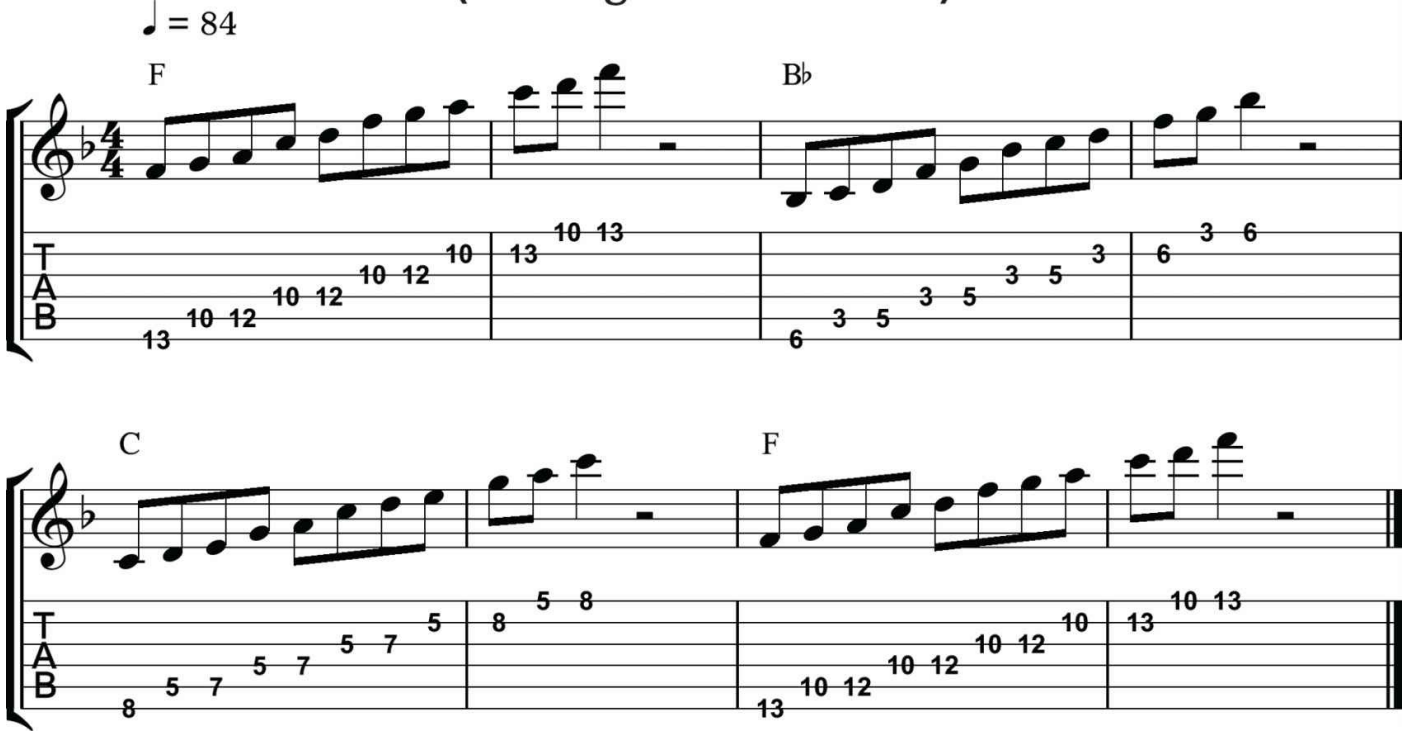


Step 1: Play the Roots

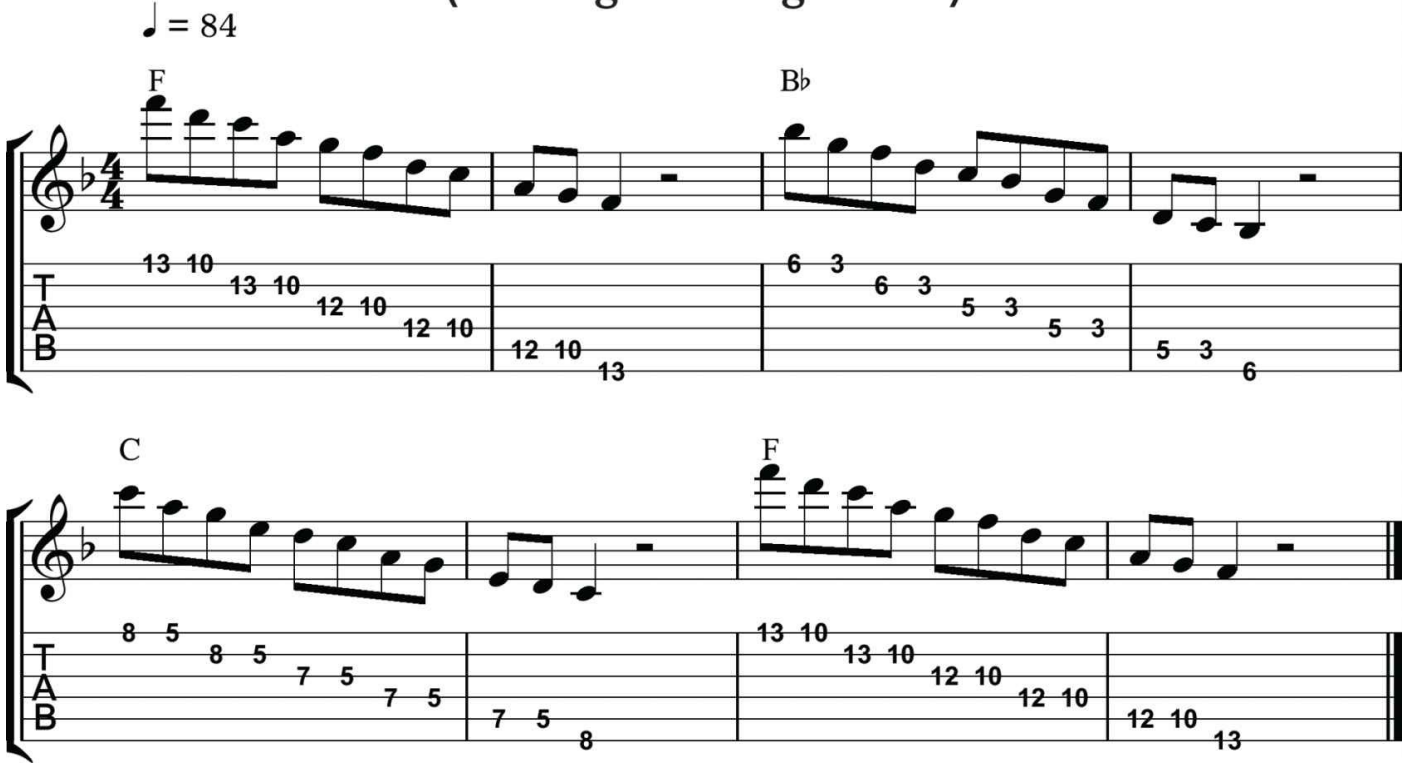


The scales in Step 2 are not able to start and end at the same low or high root because the chords only last for two measures. Therefore, continue to play the scales as you normally would, stopping on whichever note occurs on beat two.

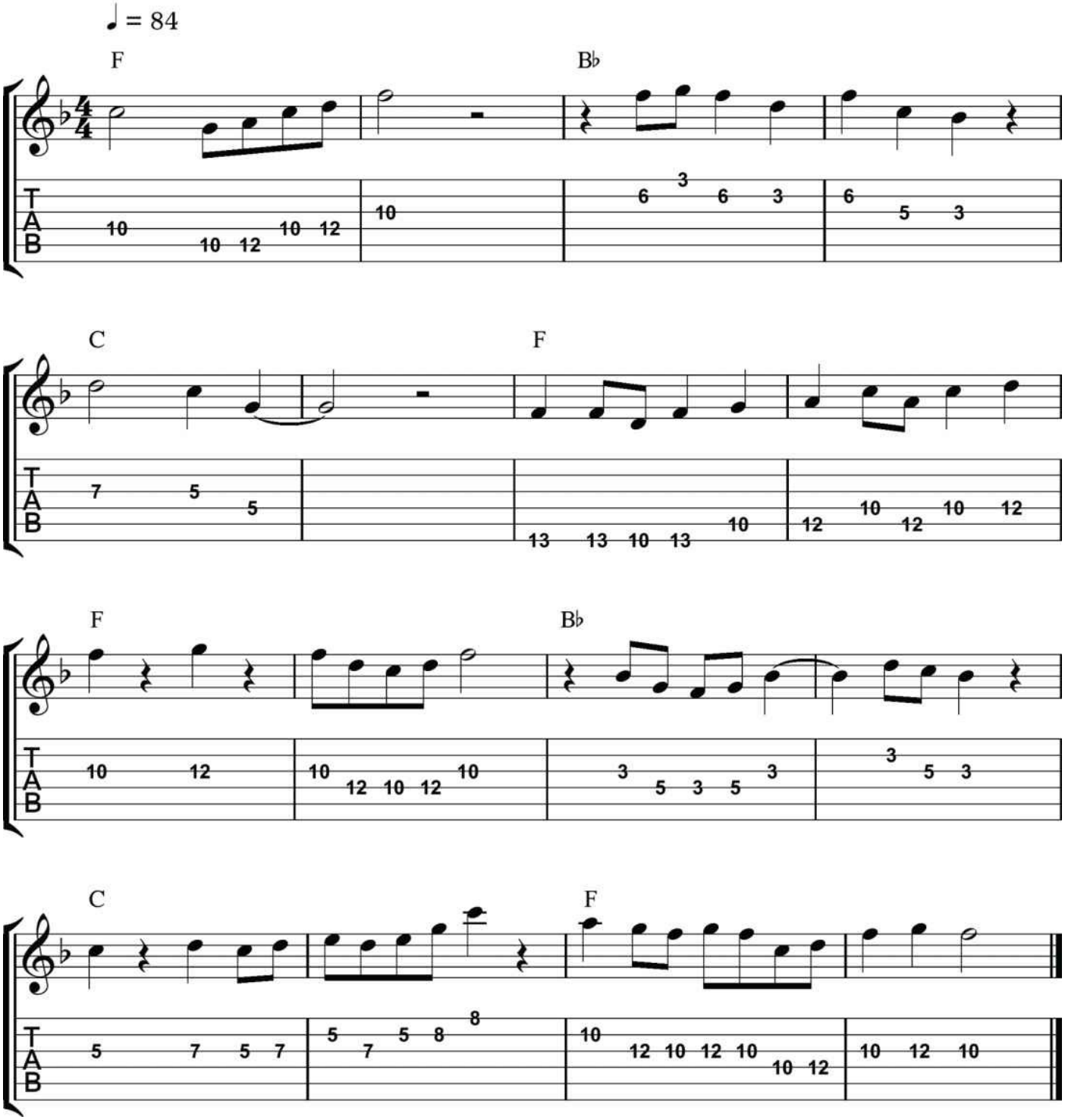
Step 2: Play the Scales (starting from low roots)



Step 2: Play the Scales (starting from high roots)



Step 3: Improvise Over the Chord Progression



Now try applying this Three-Step Method to the following major chord progressions. Work on each one until you can comfortably improvise over it. Because each chord only lasts for two measures, this may be more difficult than the previous major chord progression exercises and may require a bit more practice.

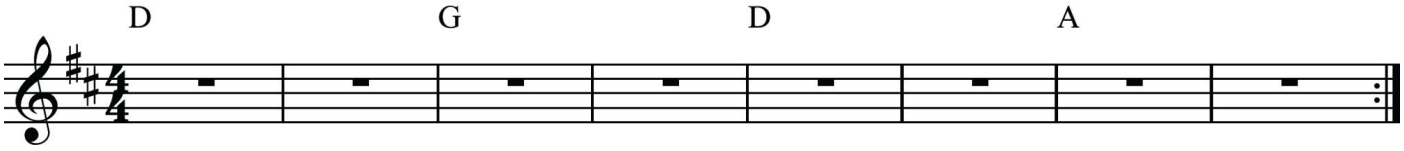
Step 1: Play the Roots (low and high)

Step 2: Play the Scales (starting from low roots and high roots)

Step 3: Improvise Over the Chord Progression

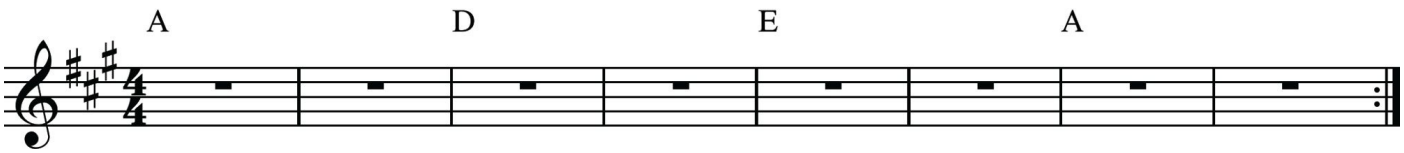
Improvising Over a Major Chord Progression, Exercise 3

♩ = 80



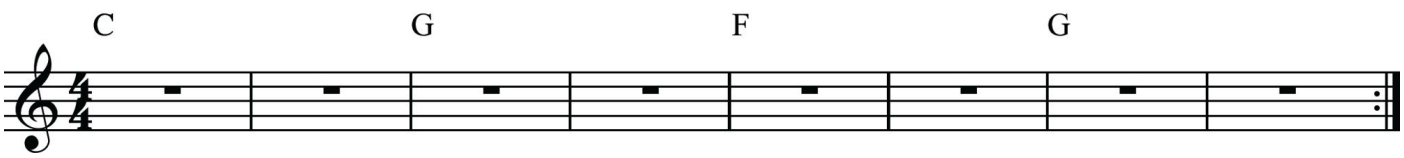
Improvising Over a Major Chord Progression, Exercise 4

♩ = 84



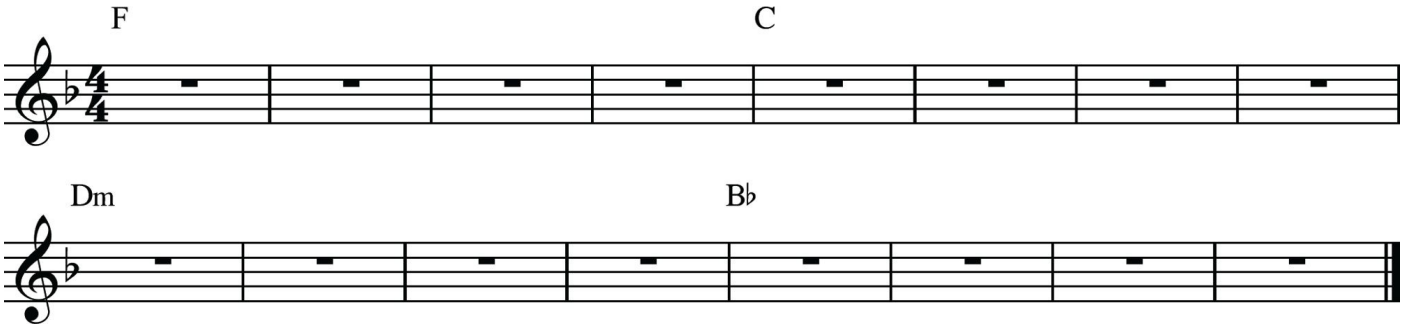
Improvising Over a Major Chord Progression, Exercise 5

♩ = 88

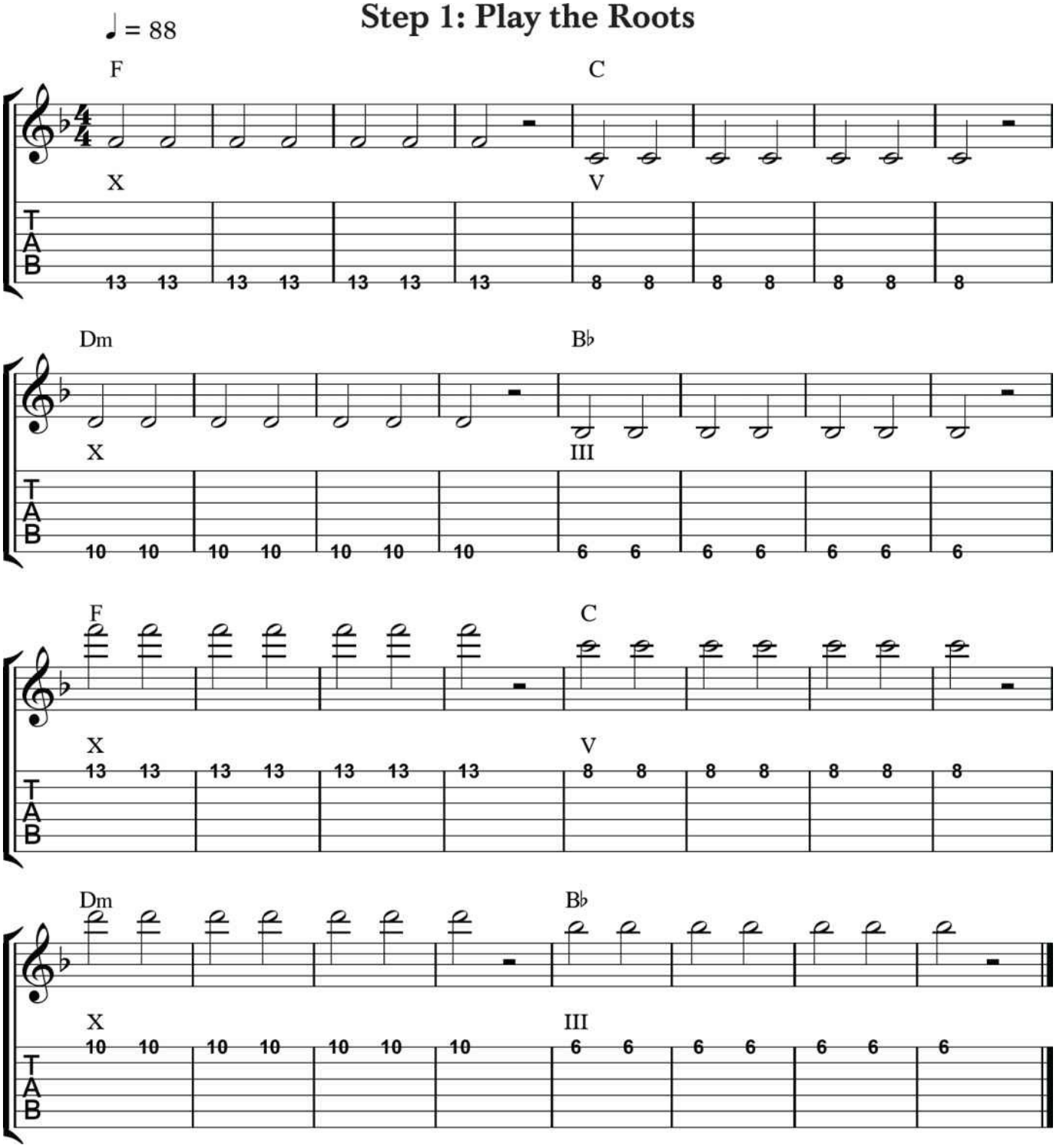


Part 3: Major & Minor Chord Progressions

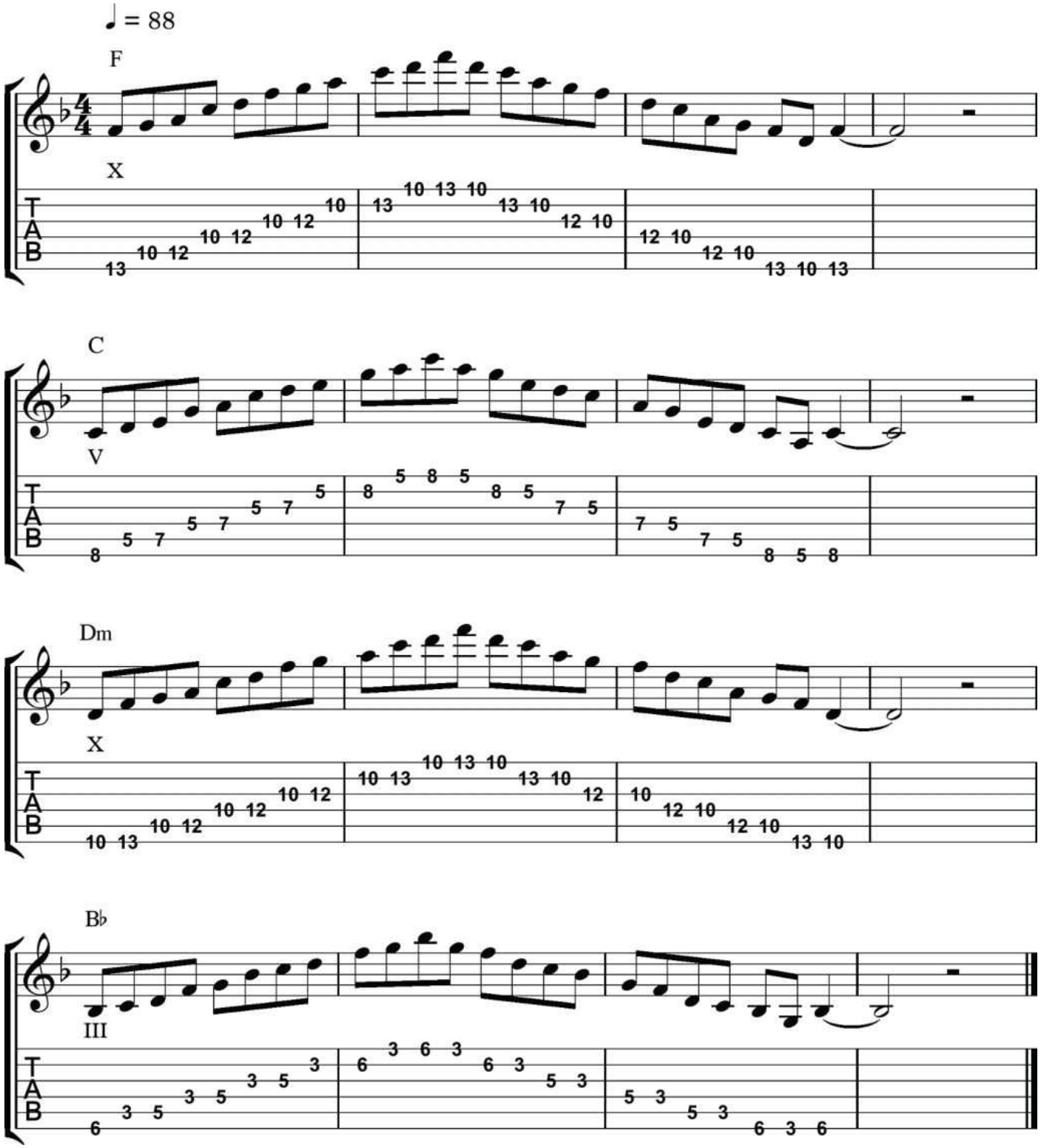
It is most common for a chord progression to contain a combination of both major and minor chords. The same Three-Step Method used previously will now be applied to these chord progressions. Remember that all major chords should use Maj Pent E4, while all minor chords should use Min Pent E1.



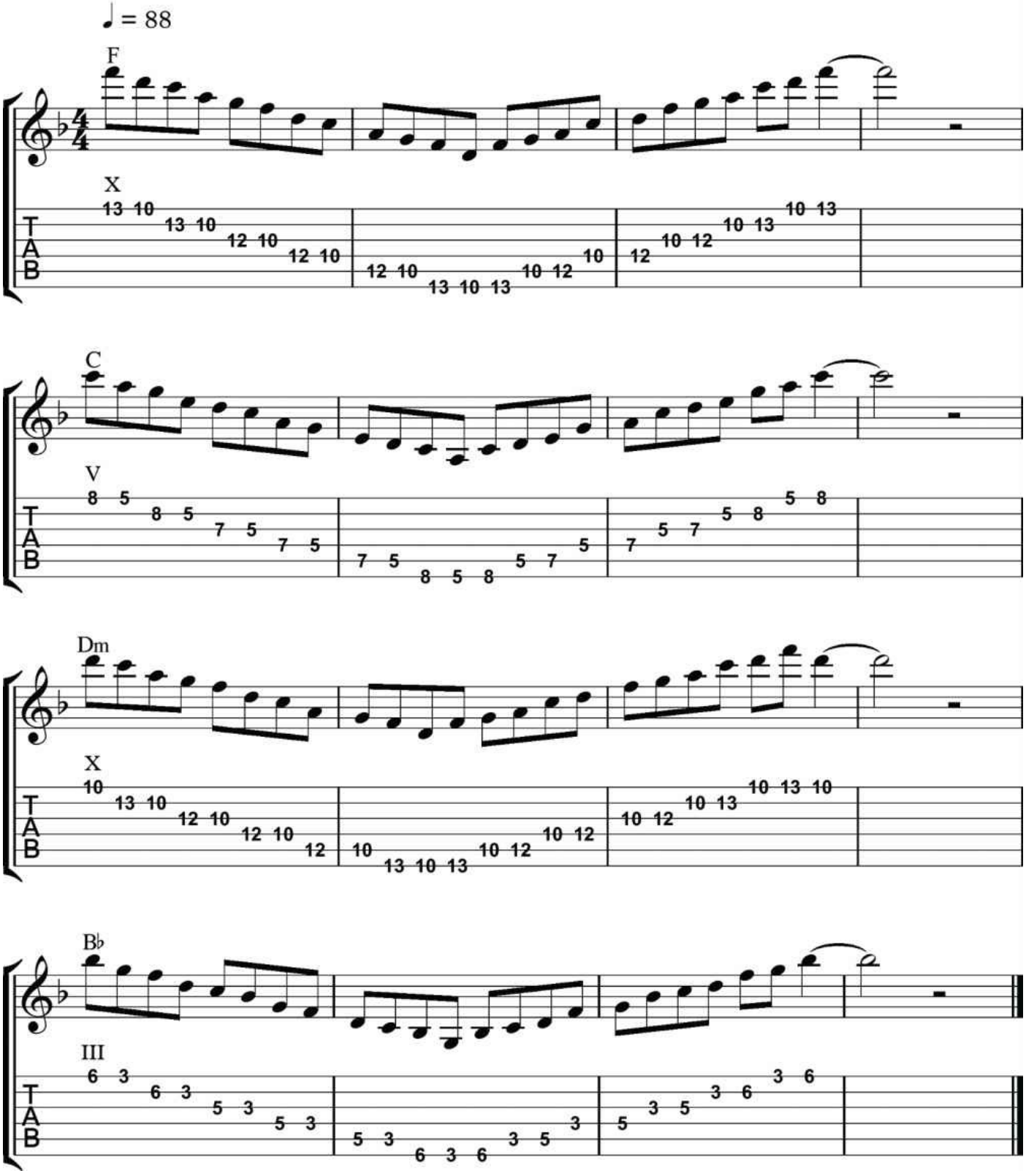
Step 1: Play the Roots



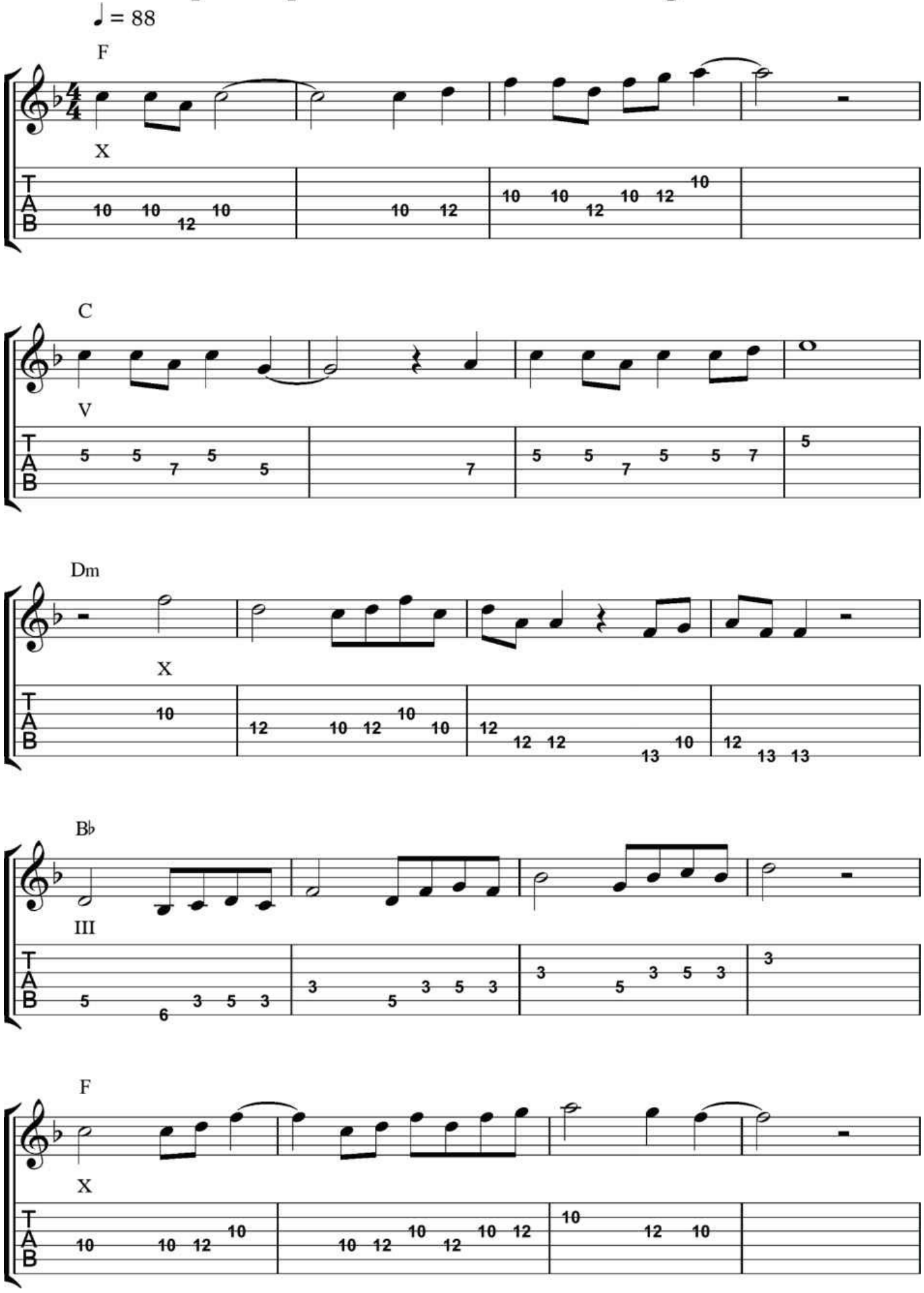
Step 2: Play the Scales
(starting from low roots)

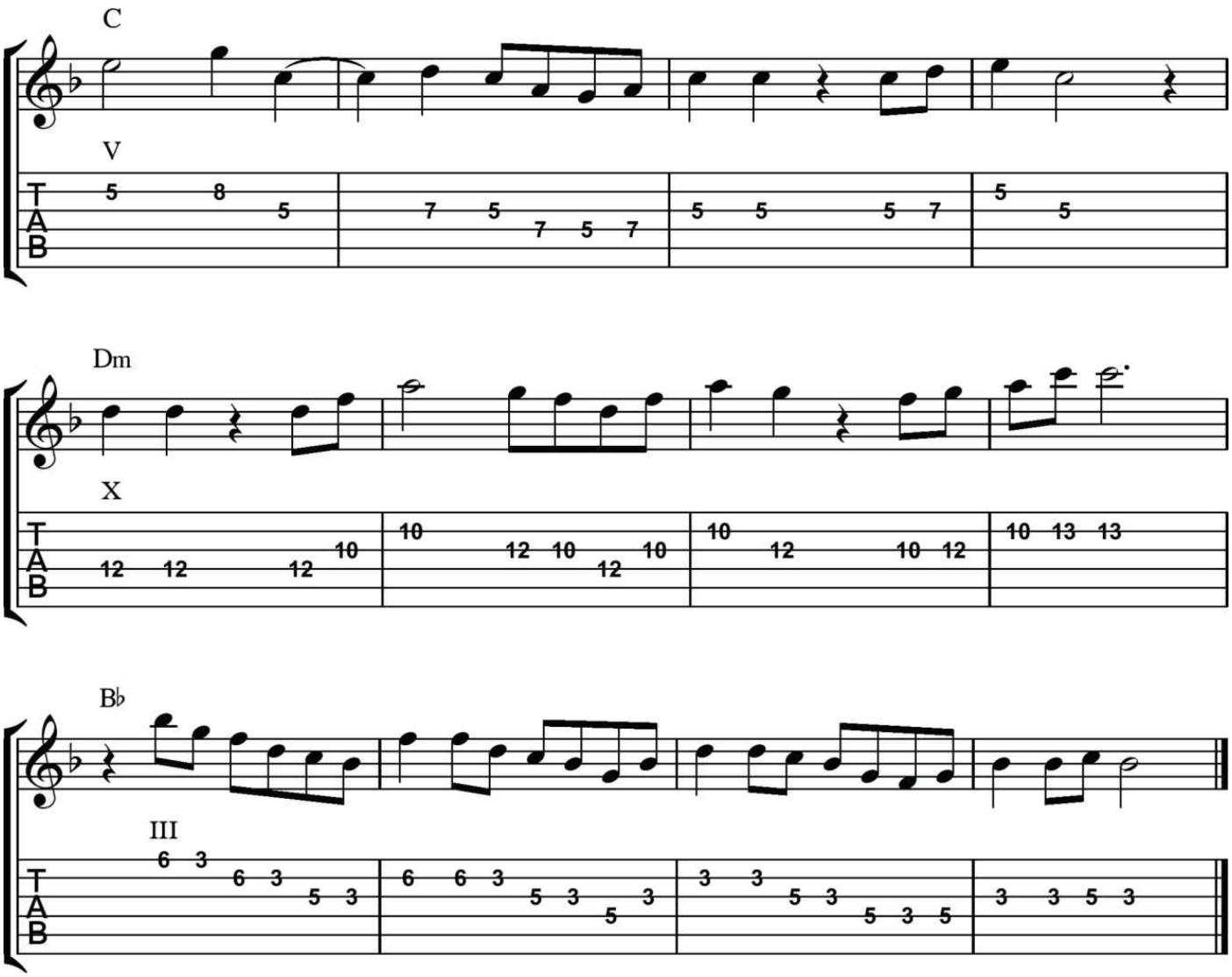


Step 2: Play the Scales
(starting from high roots)



Step 3: Improvise Over the Chord Progression





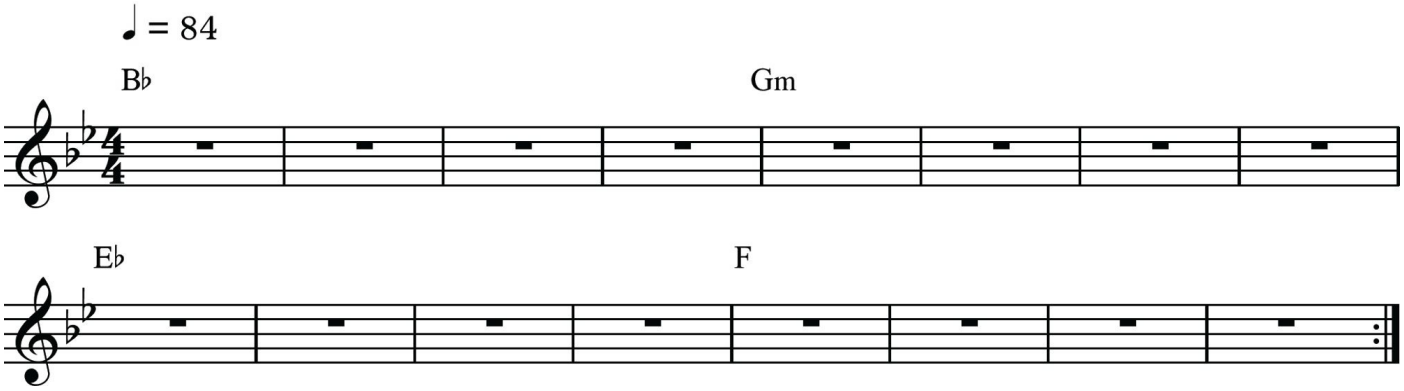
Now try applying this Three-Step Method to the following major and minor chord progressions. Work on each one until you can comfortably improvise over it.

Step 1: Play the Roots (low and high)

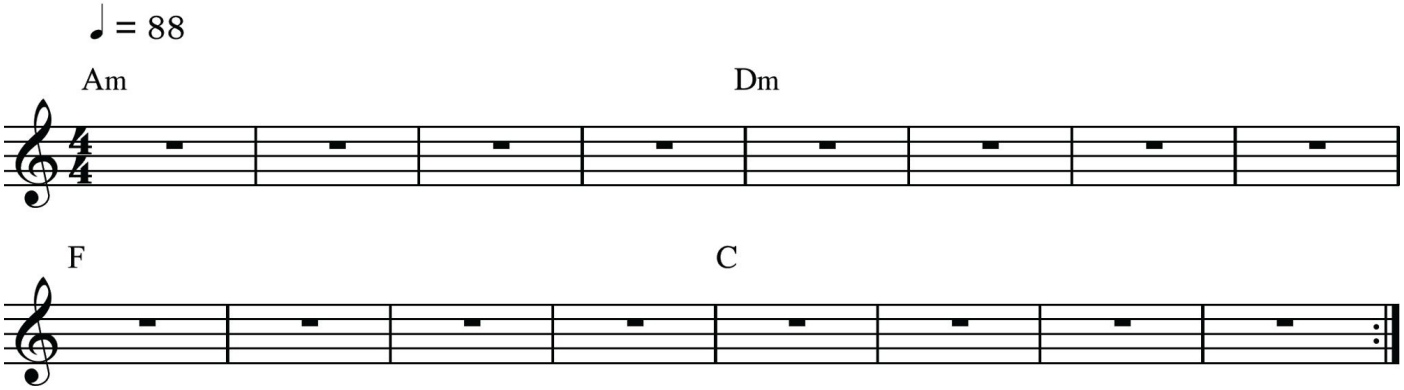
Step 2: Play the Scales (starting from low roots and high roots)

Step 3: Improvise Over the Chord Progression

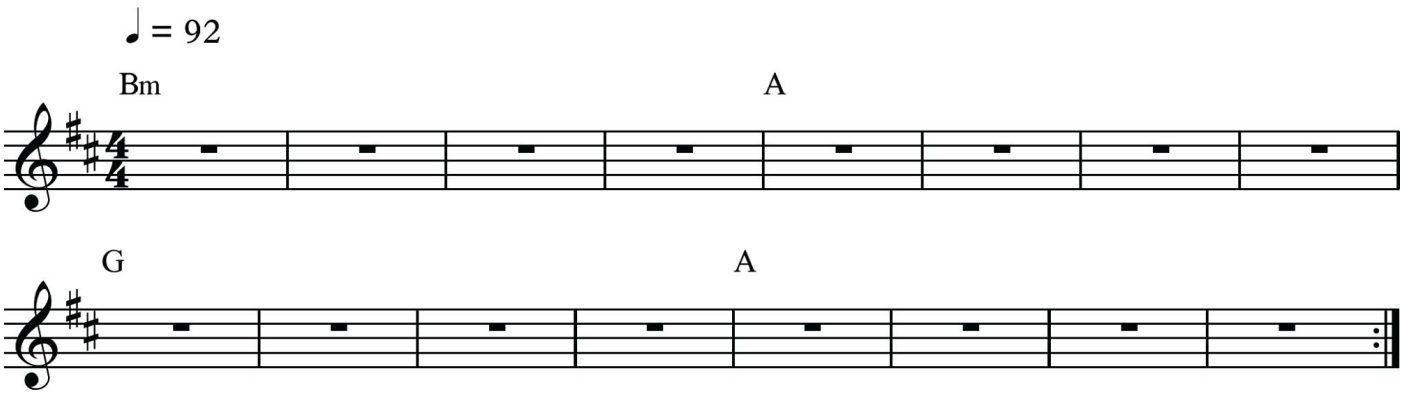
Improvising Over a Major & Minor Chord Progression, Exercise 1



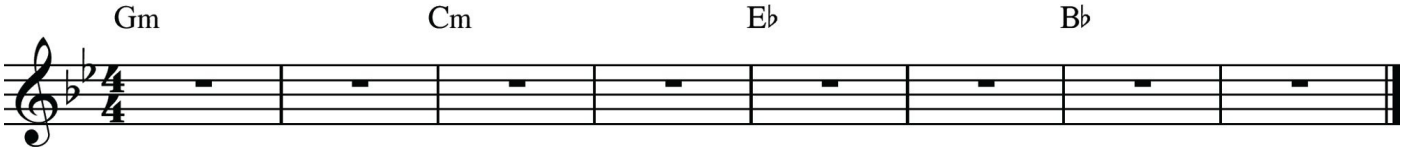
Improvising Over a Major & Minor Chord Progression, Exercise 2



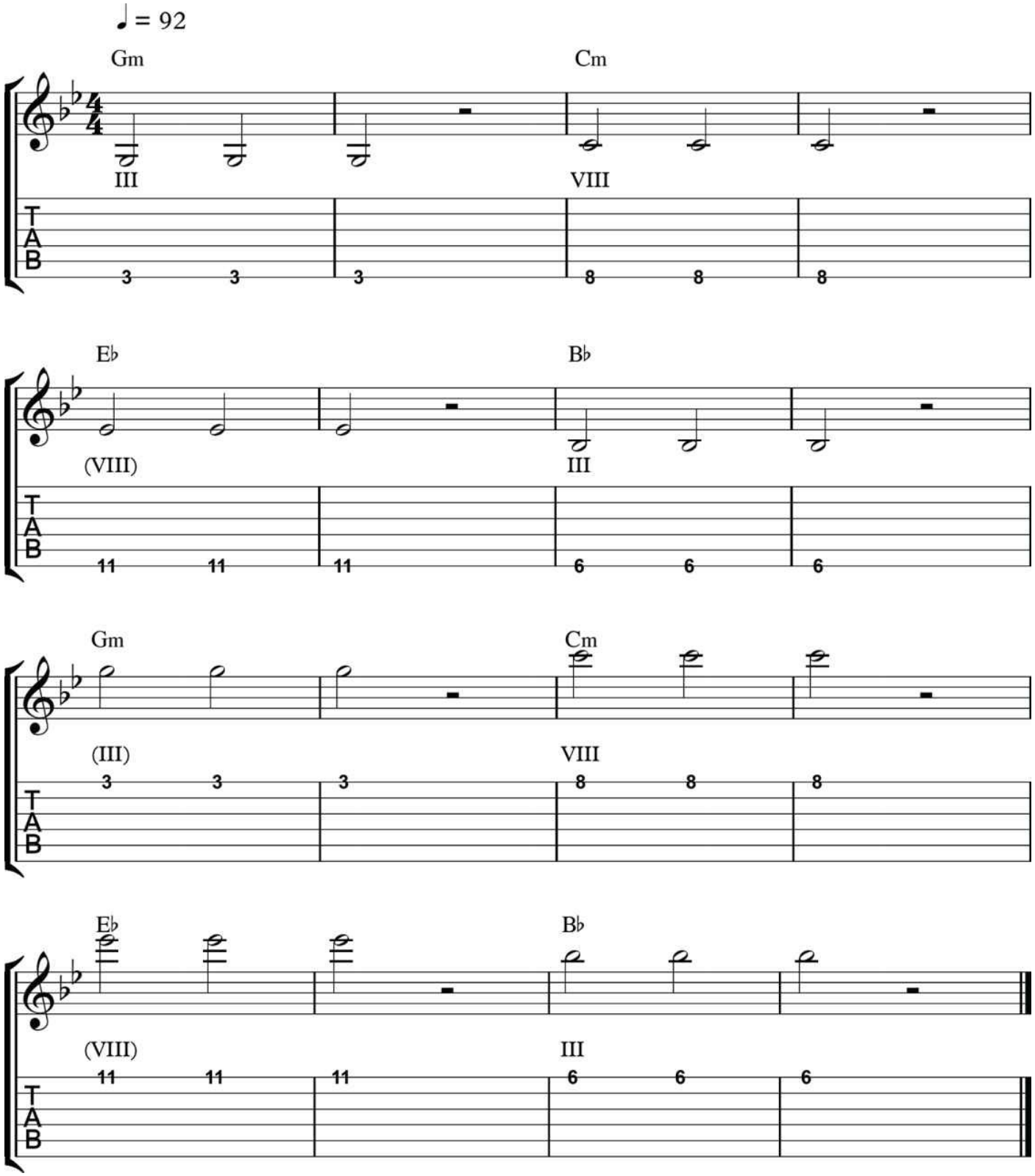
Improvising Over a Major & Minor Chord Progression, Exercise 3



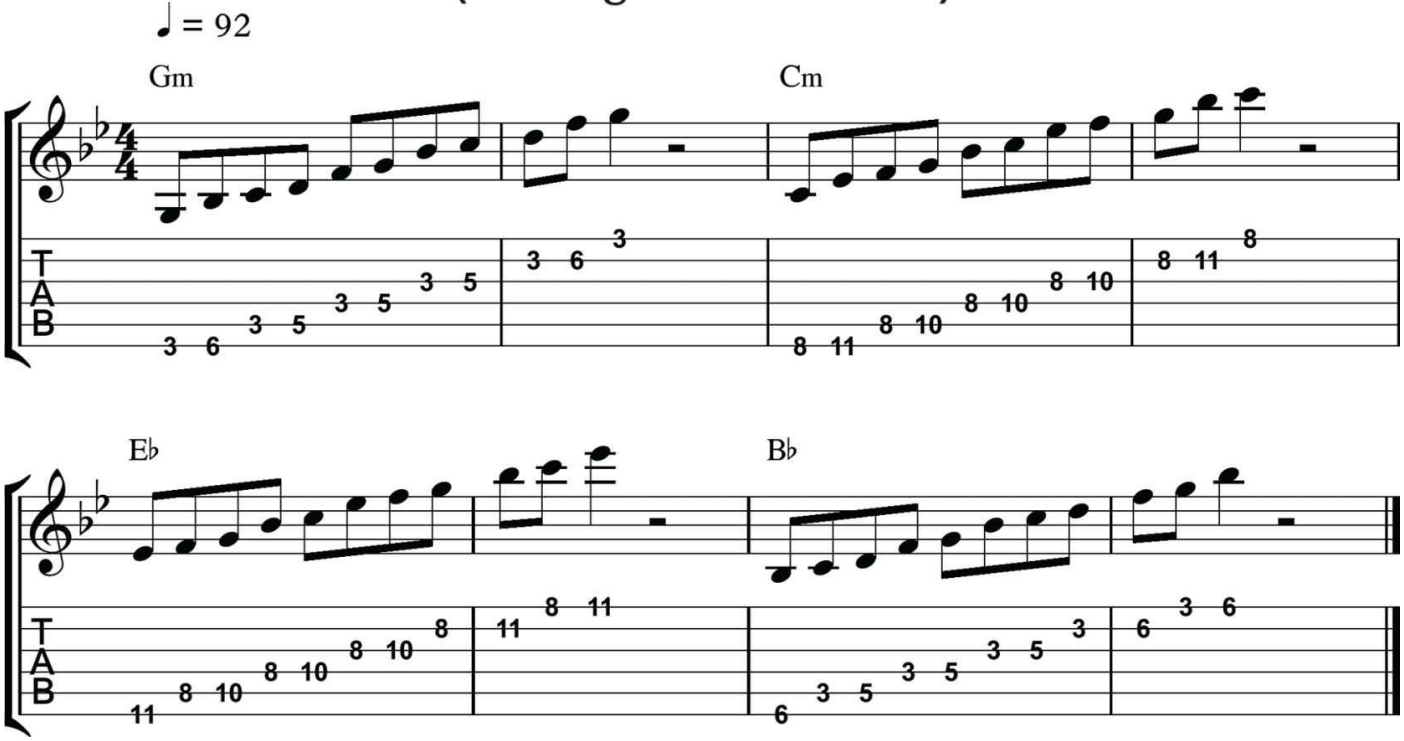
This same Three-Step Method will now be applied to a major and minor chord progression with each chord having a duration of two measures. Hand positions are only notated in Step 1, but should remain the same in Steps 2 and 3.



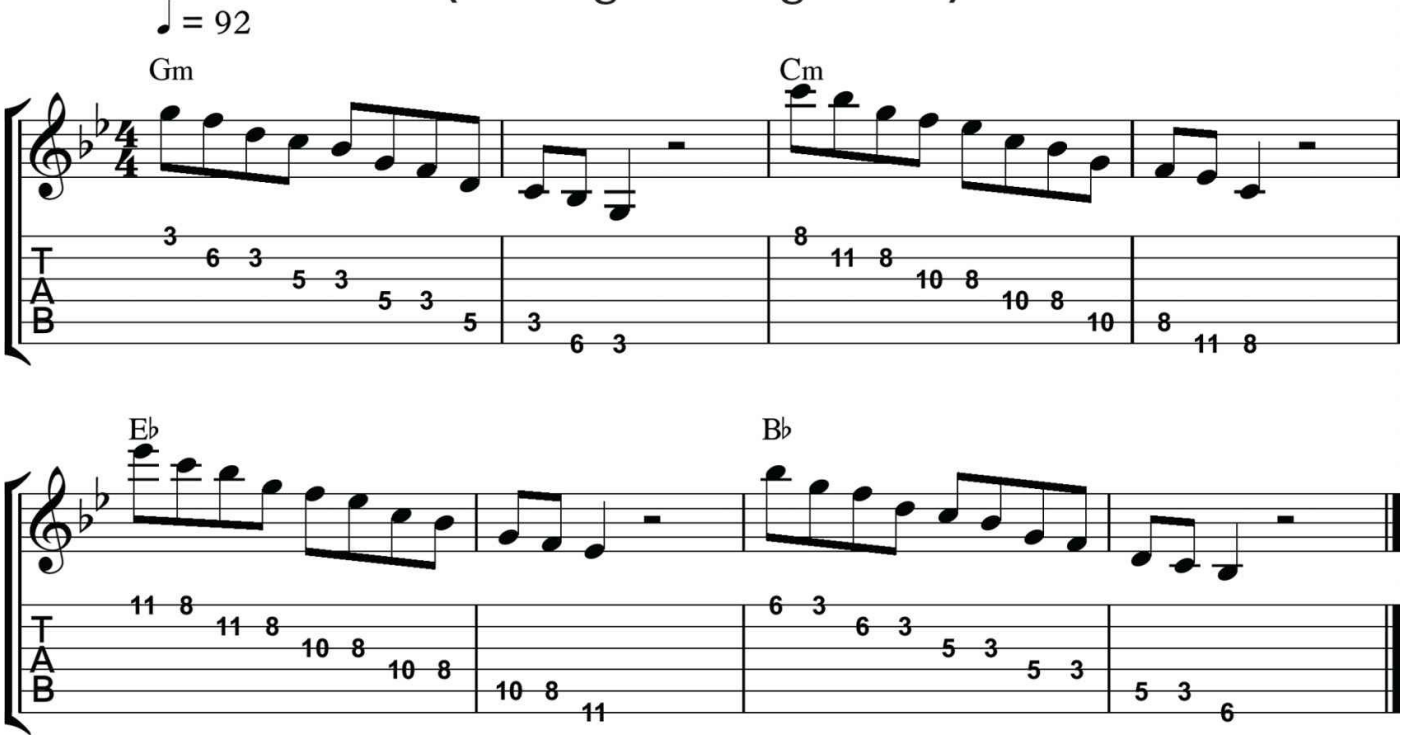
Step 1: Play the Roots



Step 2: Play the Scales
(starting from low roots)

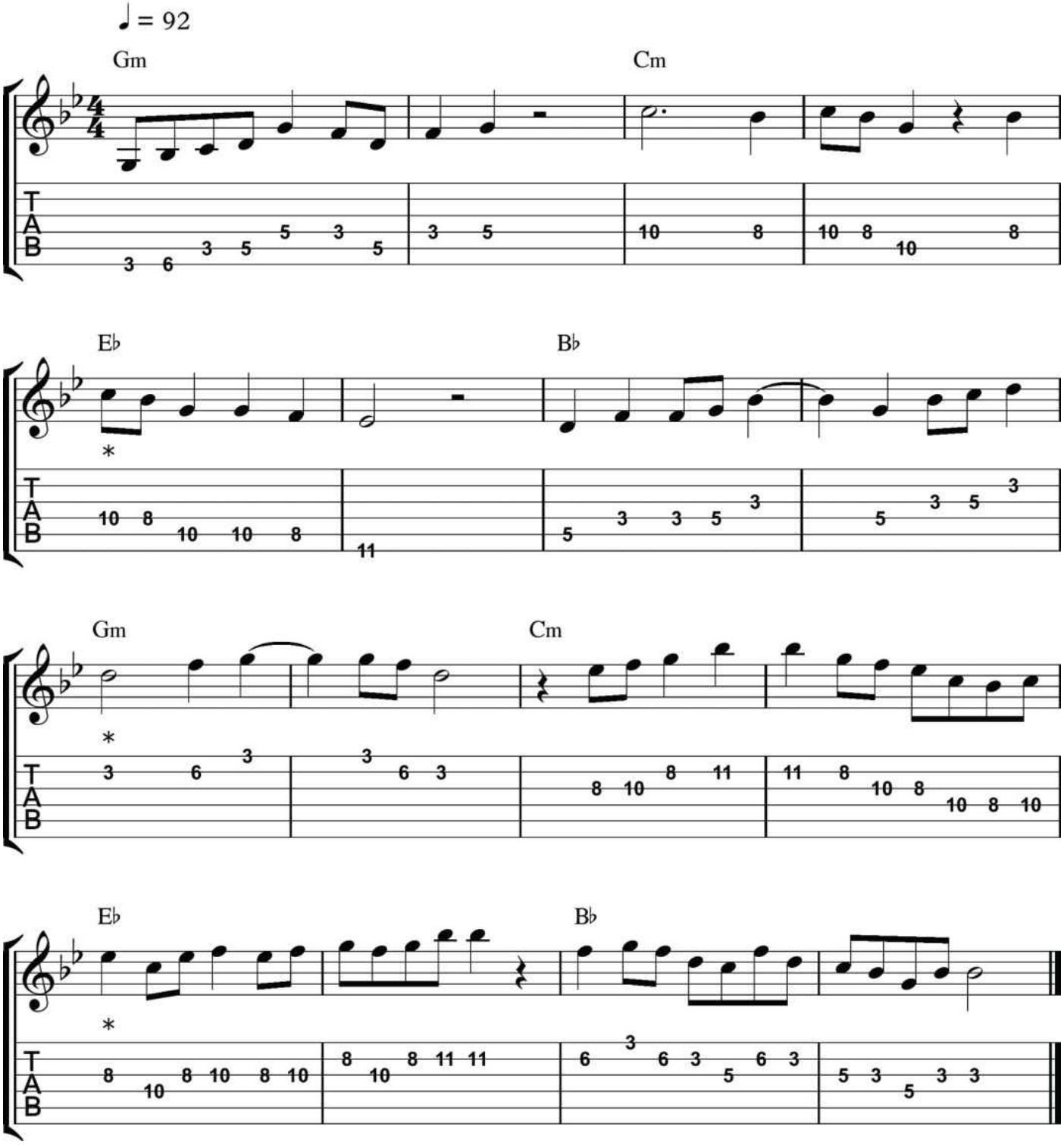


Step 2: Play the Scales
(starting from high roots)



There are three places in Step 3 that are marked (*) because they include a new concept. Although the chords change in these instances, the hand position remains the same because the major and minor scales are relative to one another. Therefore, the notes can flow from one measure to another without the need for rests.

Step 3: Improvise Over the Chord Progression



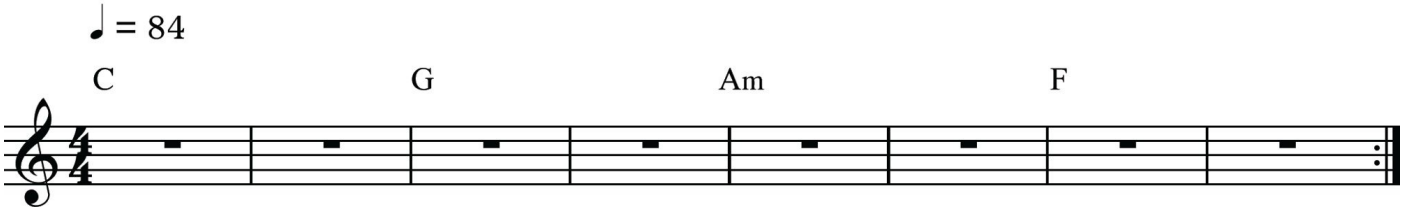
Now try applying this Three-Step Method to the following major and minor chord progressions. Work on each one until you can comfortably improvise over it.

Step 1: Play the Roots (low and high)

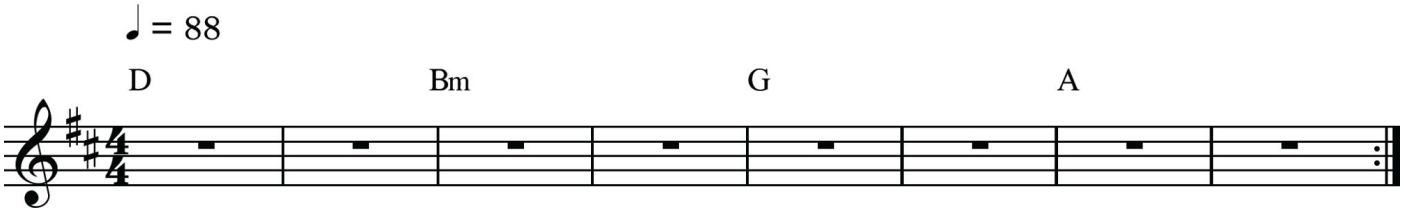
Step 2: Play the Scales (starting from low roots and high roots)

Step 3: Improvise Over the Chord Progression

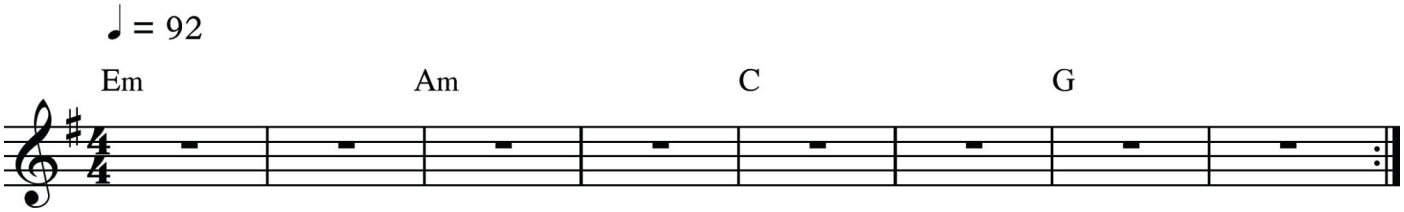
Improvising Over a Major & Minor Chord Progression, Exercise 4



Improvising Over a Major & Minor Chord Progression, Exercise 5



Improvising Over a Major & Minor Chord Progression, Exercise 6



Chapter 6

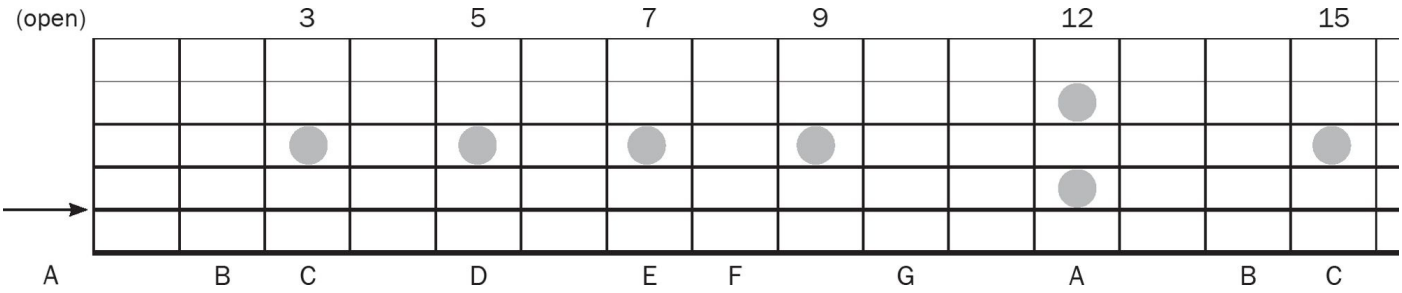
The Second Pentatonic Scale Shape

Using one pentatonic scale shape for improvisation on the guitar is a necessary start, but is not the ideal approach. As shown in the previous chapter, almost every time a chord changes, you will be forced to move your hand to another position on the neck. This may cause unwanted rests, and will restrict your ability to play longer phrases of notes while chords continue to change.

The application of a second pentatonic shape will begin to eliminate these issues. The second pentatonic scale shape (which will again apply to a major pentatonic scale and its relative minor pentatonic scale) has the low roots located on the A-string.

Part 1: Notes Across the A-String

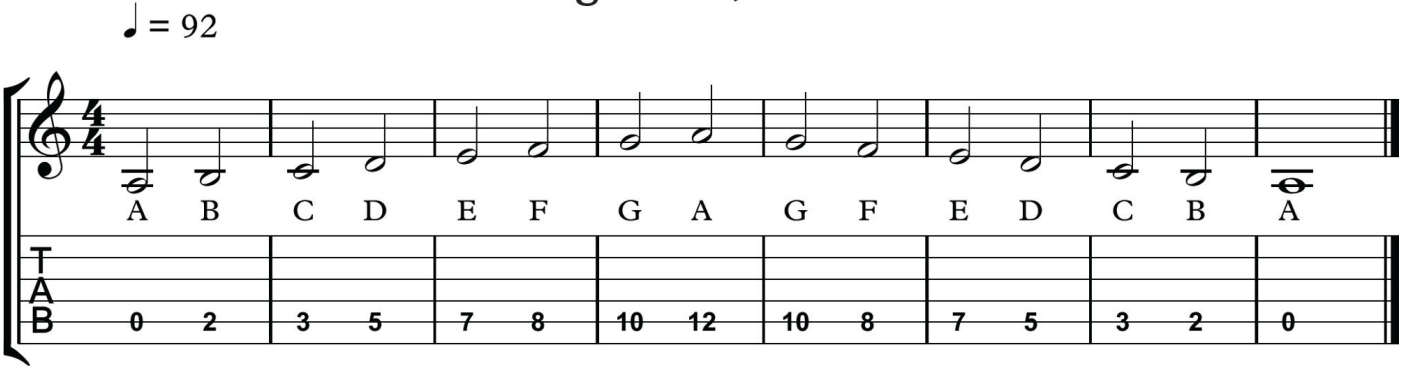
The following diagram shows all of the natural notes across the A-string of the guitar up to the 15th fret. Also, the most common arrangement of fretboard dots is in the middle of the guitar neck and their relative fret numbers are written above. Because the A-string will contain the roots of the second pentatonic scale shape (both major and minor), the knowledge of this sequence of notes is essential to knowing where to move the scale shape.



Notice that just like the E-strings, there are two groups of notes that occur right next to each other and do not have an unlabeled fret in between them — 1) E & F, and 2) B & C. Also, the note A is the open string and is also the 12th fret, where the double-dot occurs. Like the E-strings, this indicates that the entire note sequence has reached an octave and will now repeat.

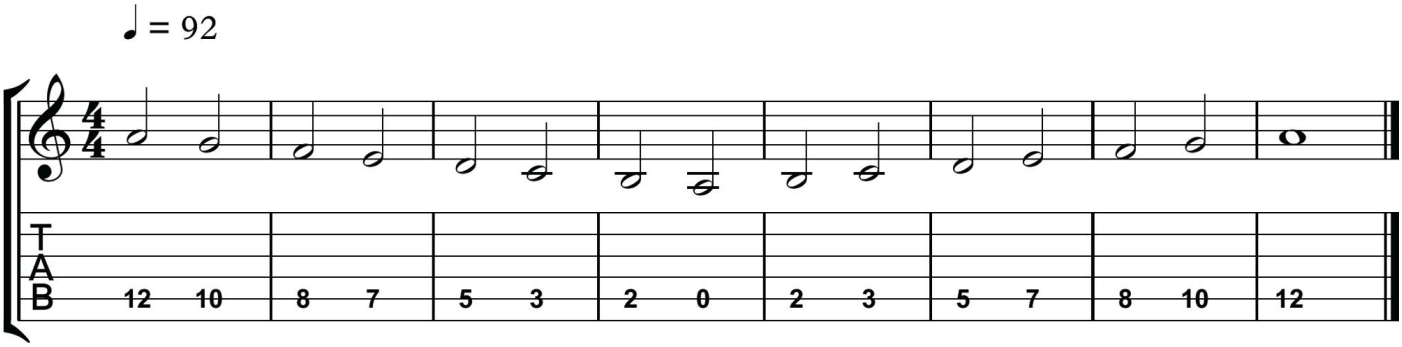
Use the following exercises to become comfortable with the note sequence on the A-string. Say the note names aloud as you play to help associate the note names with their frets, and use the 1st finger of your fretting hand to play these notes. The first exercise has the note names written to get you started.

A-String Notes, Exercise 1



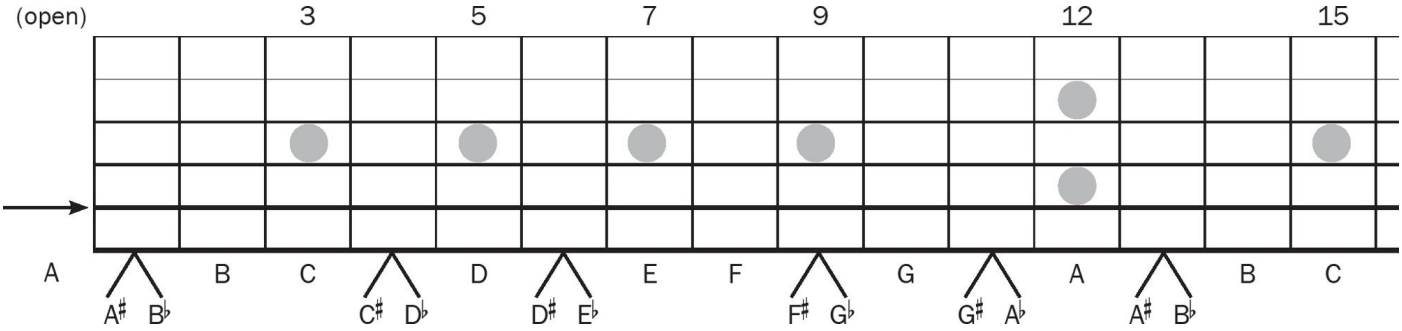
A-String Notes, Exercise 2

(Continue to say note names aloud)



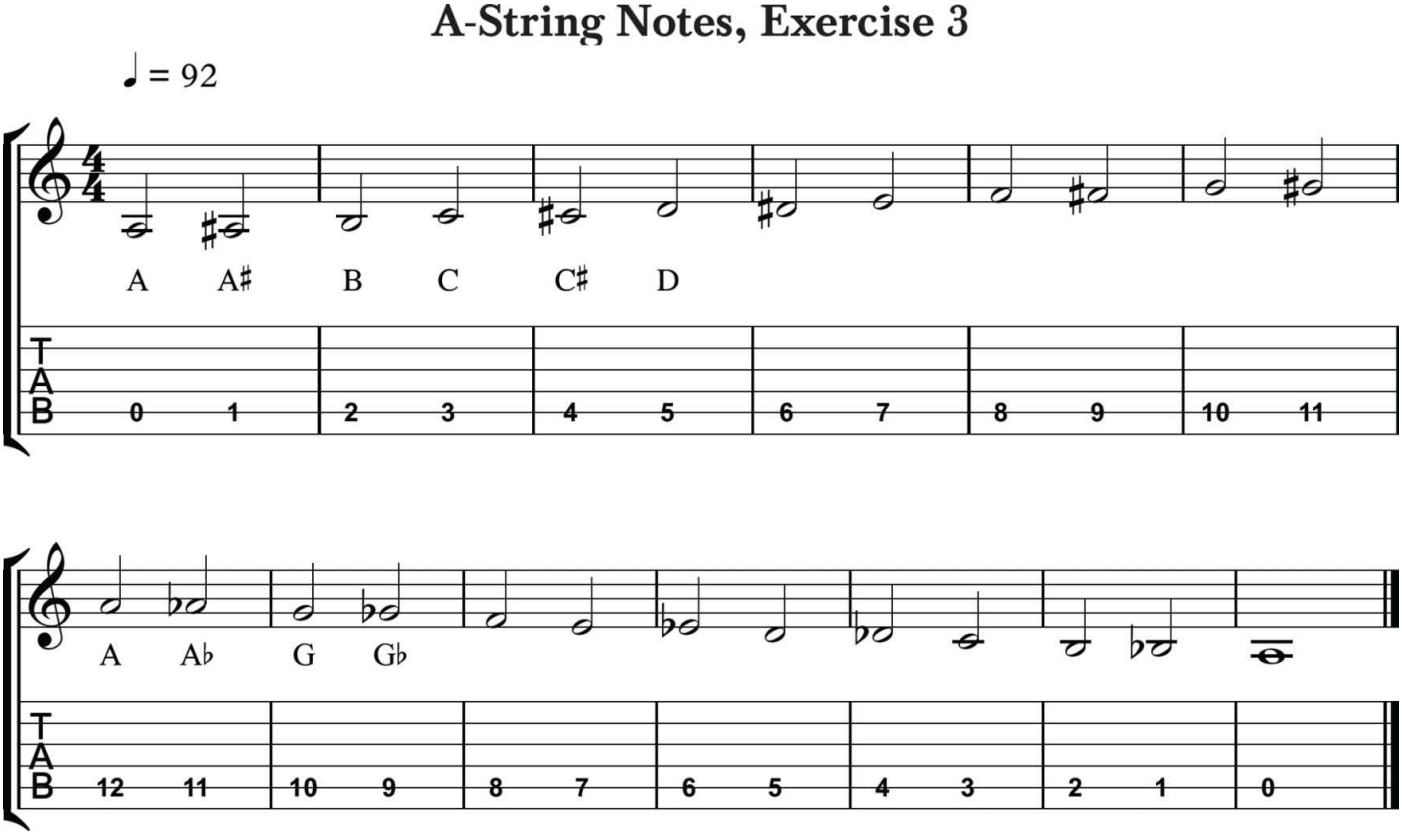
The diagram below shows all of the possible notes across the A-string up to the 15th fret,

including those that are flat and sharp. Again, the most common arrangement of fretboard dots is in the middle of the guitar neck and their relative fret numbers are written above.



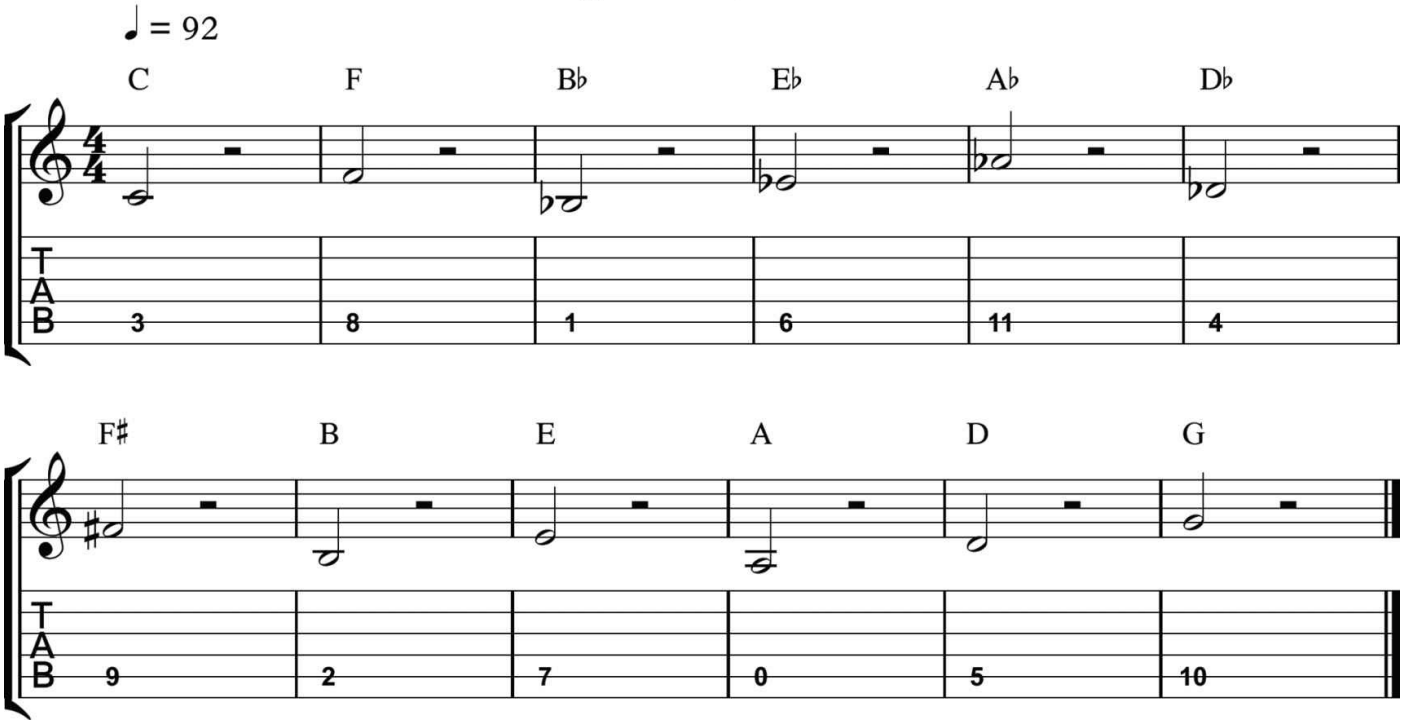
Use the following exercises to become comfortable with the entire note sequence of the A-string. Say the note names aloud as you play and continue to use your 1st finger to play these notes.

Exercise 3 will include all notes across the A-string by going in order up and down the neck. Use sharp names as the notes move higher and use flat names as the notes move lower.



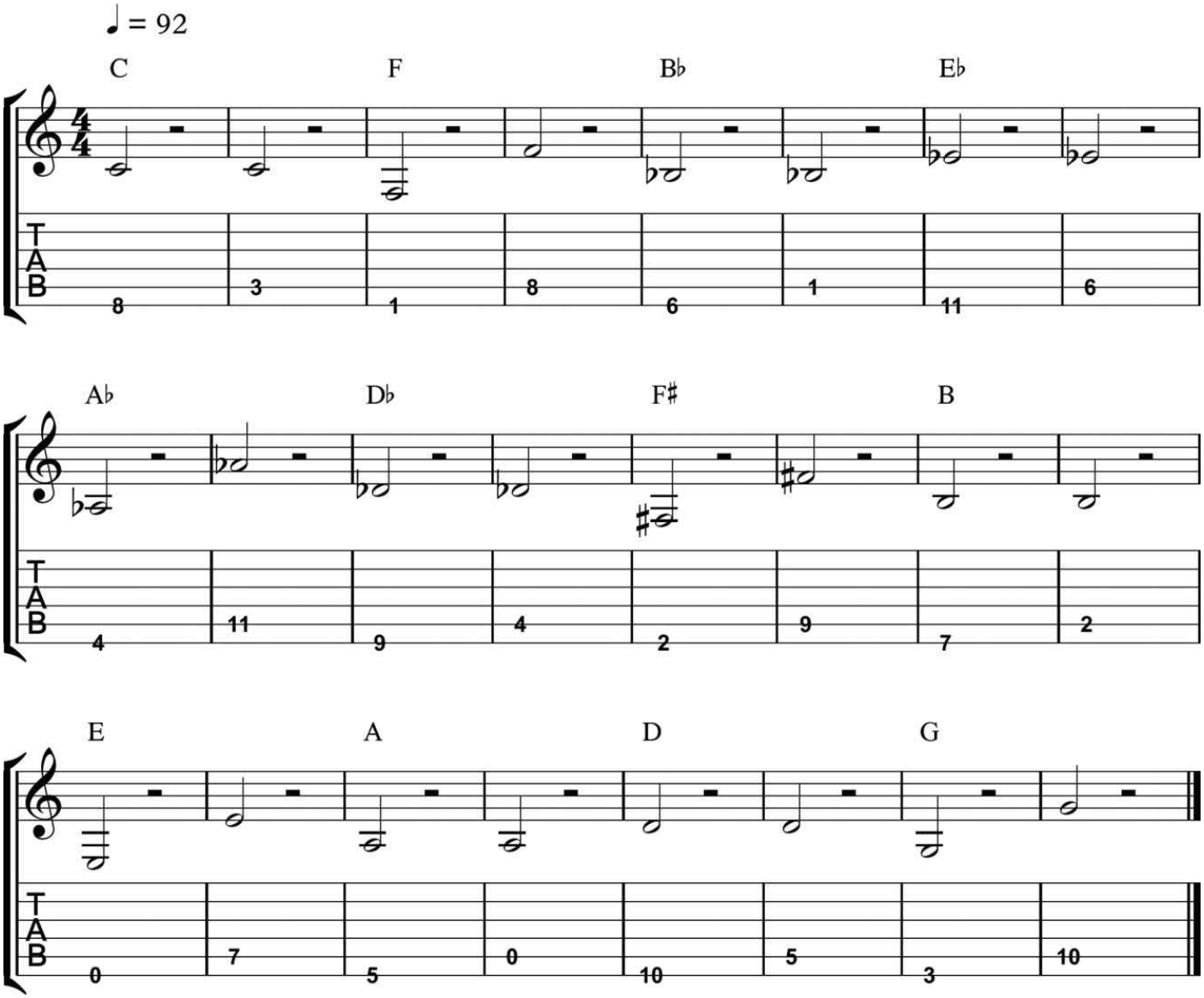
Exercise 4 will include all notes across the A-string by having the chords move around the entire circle of fifths. Using the A-string, play the root of the chord and say the appropriate note name that will fit the chords (an F-sharp chord should use the note name “F-sharp,” not “G-flat”).

A-String Notes, Exercise 4



The following exercise is a bit different than previous exercises, and may be more difficult. As the chords move around the circle of fifths, you should play the lowest available root of the chord on each string — first the low E-string, then the A-string. These roots will sometimes be in the same octave, and will sometimes sound one octave apart. The 1st finger of the fretting hand should still be used for this exercise.

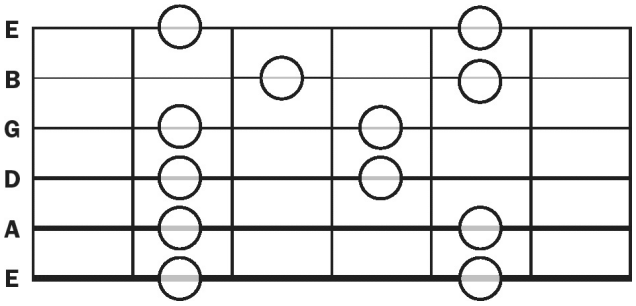
E-String and A-String Notes



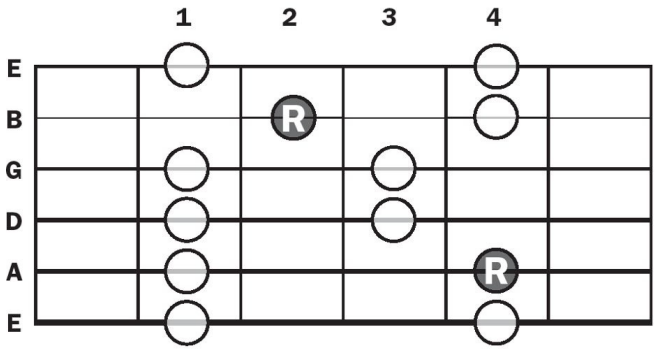
Now that you have gained a solid understanding of the A-string notes, it is time to explore the second pentatonic scale shape, and how it can be played as a major pentatonic scale or a minor pentatonic scale.

Part 2: Maj Pent A4 & Min Pent A1

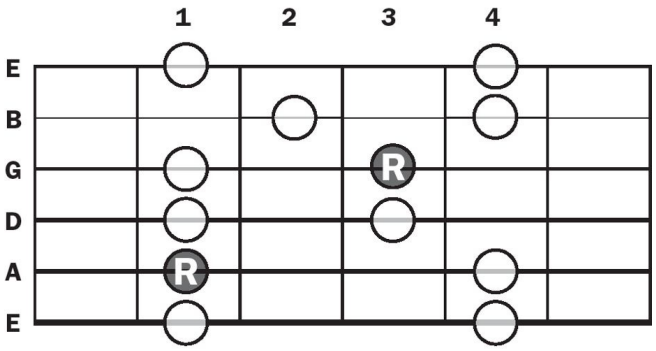
Below is another pentatonic scale shape that can be made into a major pentatonic scale or a minor pentatonic scale, depending on where the roots are located.



Major Pentatonic A4



Minor Pentatonic A1

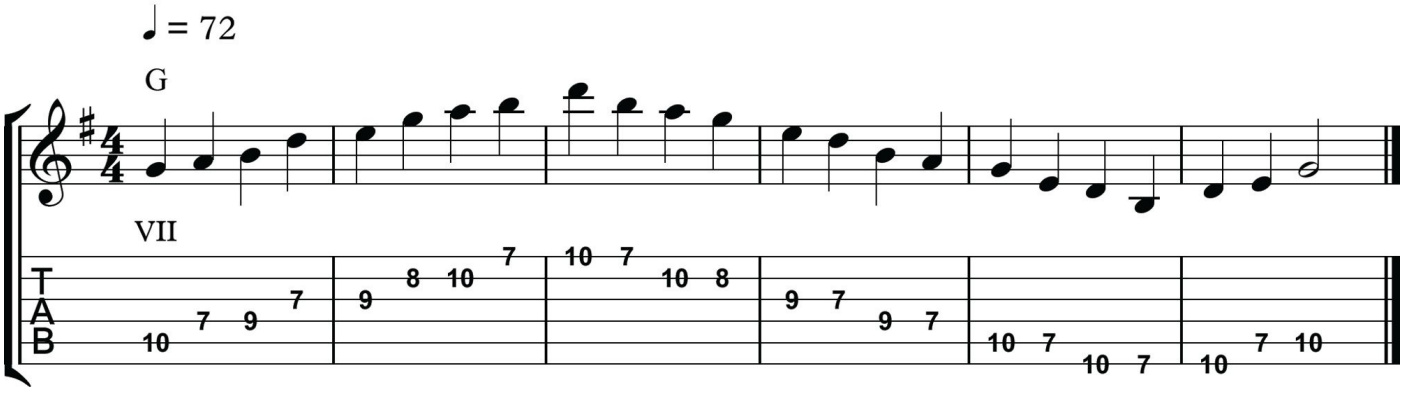


This major pentatonic shape is called **Major Pentatonic Scale Shape A4** ("A" because the lowest root is on the A-string and "4" because that root is played with the 4th finger), and may be abbreviated as **Maj Pent A4**. The high root of the scale is located on the 2nd string (B-string) and is played with the 2nd finger.

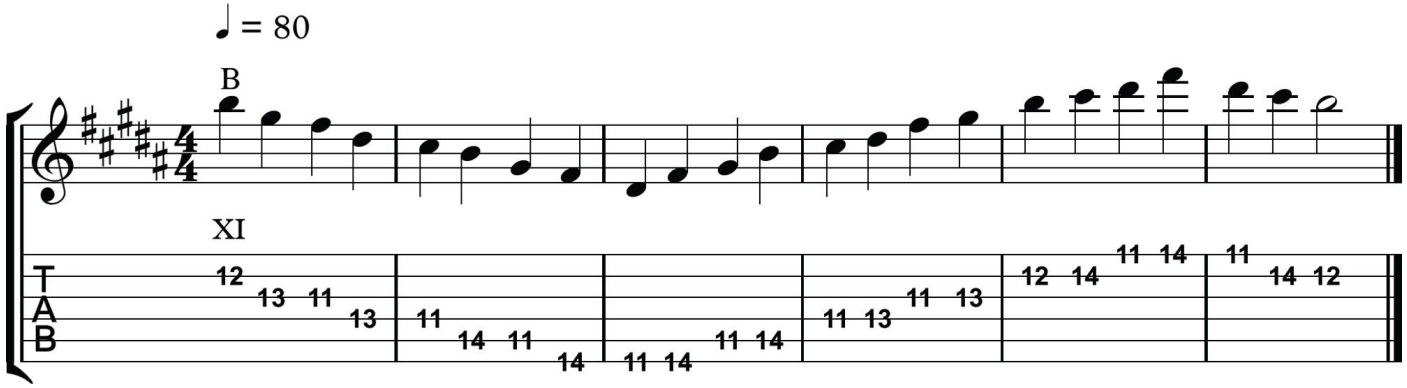
This minor pentatonic shape is called **Minor Pentatonic Scale Shape A1** ("A" because the lowest root is on the A-string and "1" because that root is played with the 1st finger), and may be abbreviated as **Min Pent A1**. The high root of the scale is located on the 3rd string (G-string) and is played with the 3rd finger.

The following pages contain scale exercises that will get you comfortable with playing the Major Pentatonic Scale Shape A4 and the Minor Pentatonic Scale Shape A1, along with moving these scales to different locations on the neck. For best results, be sure that you can play each exercise at the notated tempo before moving to the next exercise. All scales will begin and end on a root.

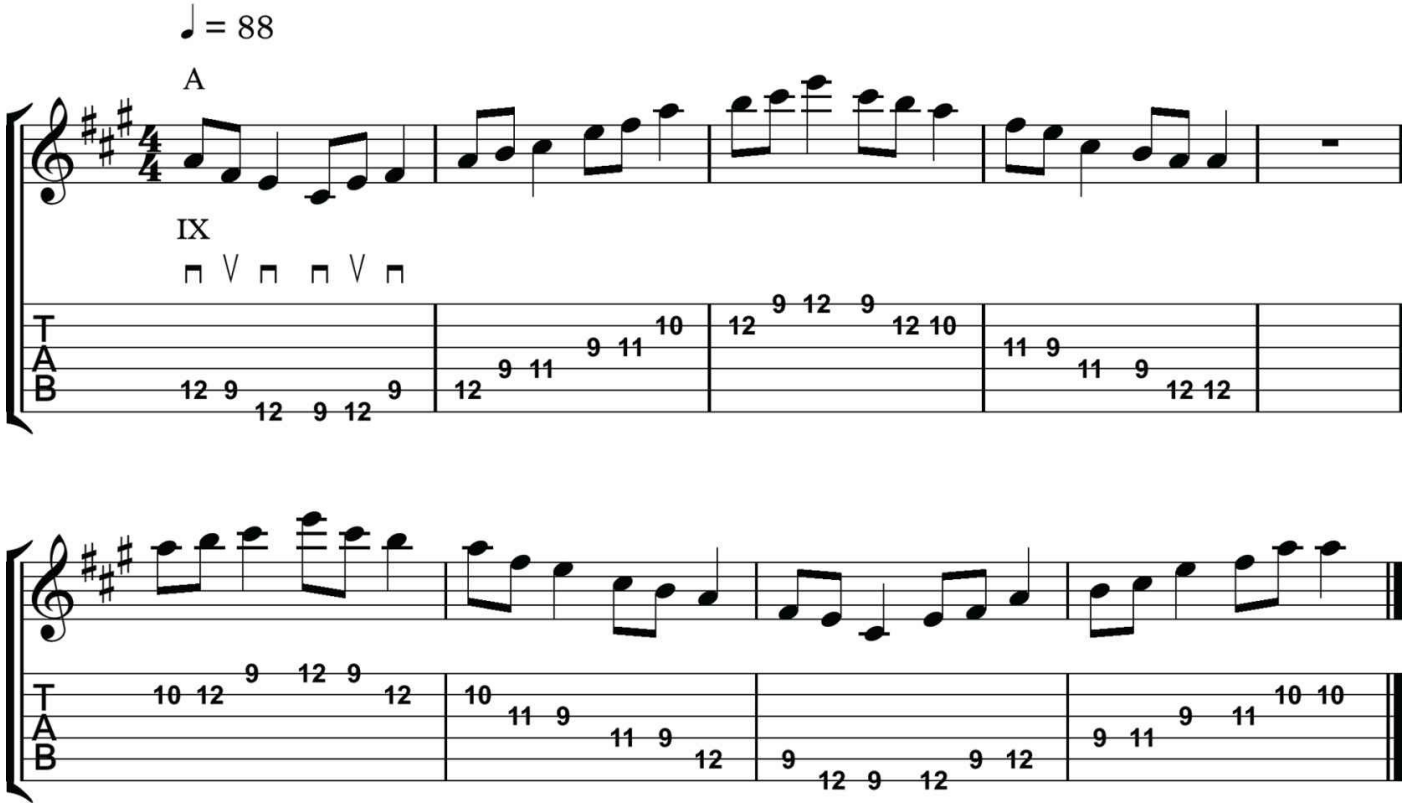
Playing Maj Pent A4, Exercise 1 (in G)



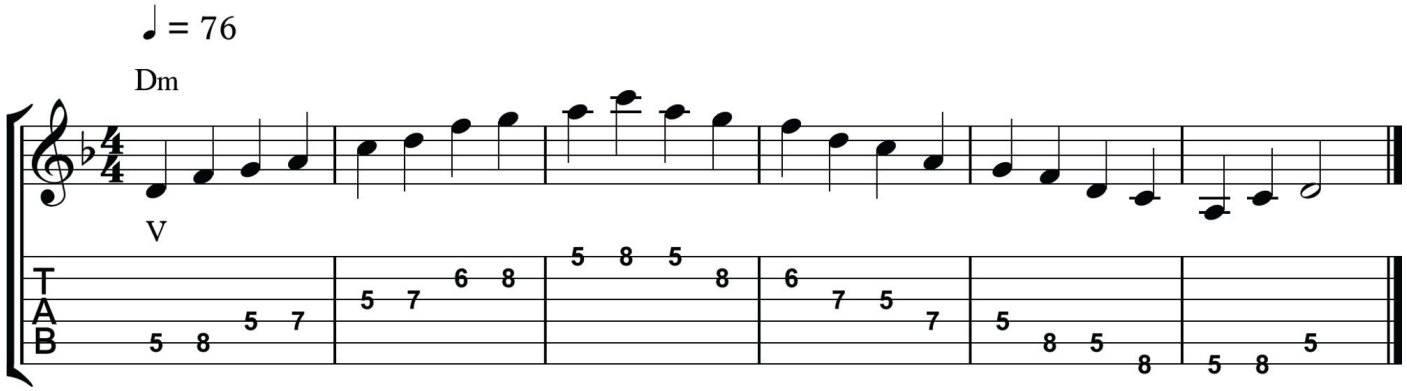
Playing Maj Pent A4, Exercise 2 (in B)



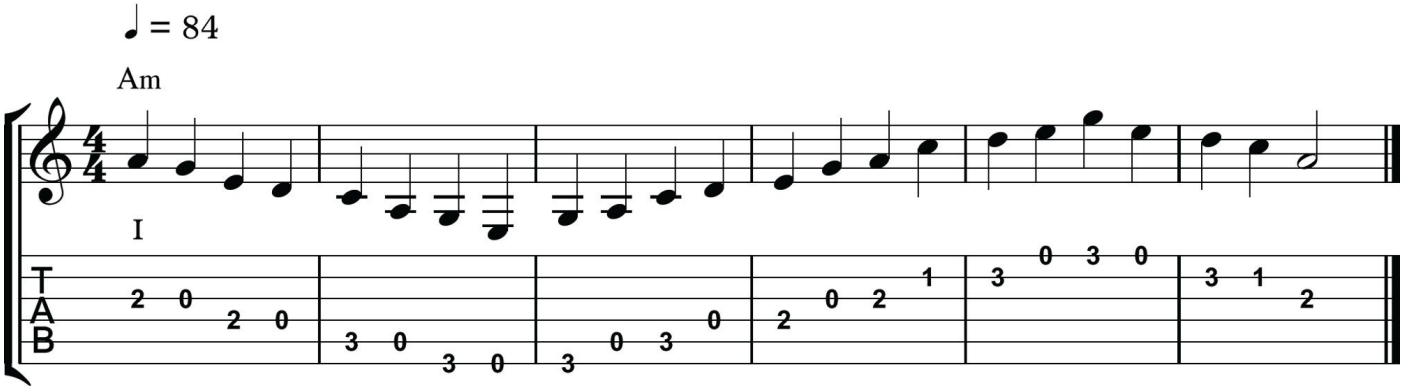
Playing Maj Pent A4, Exercise 3 (in A)



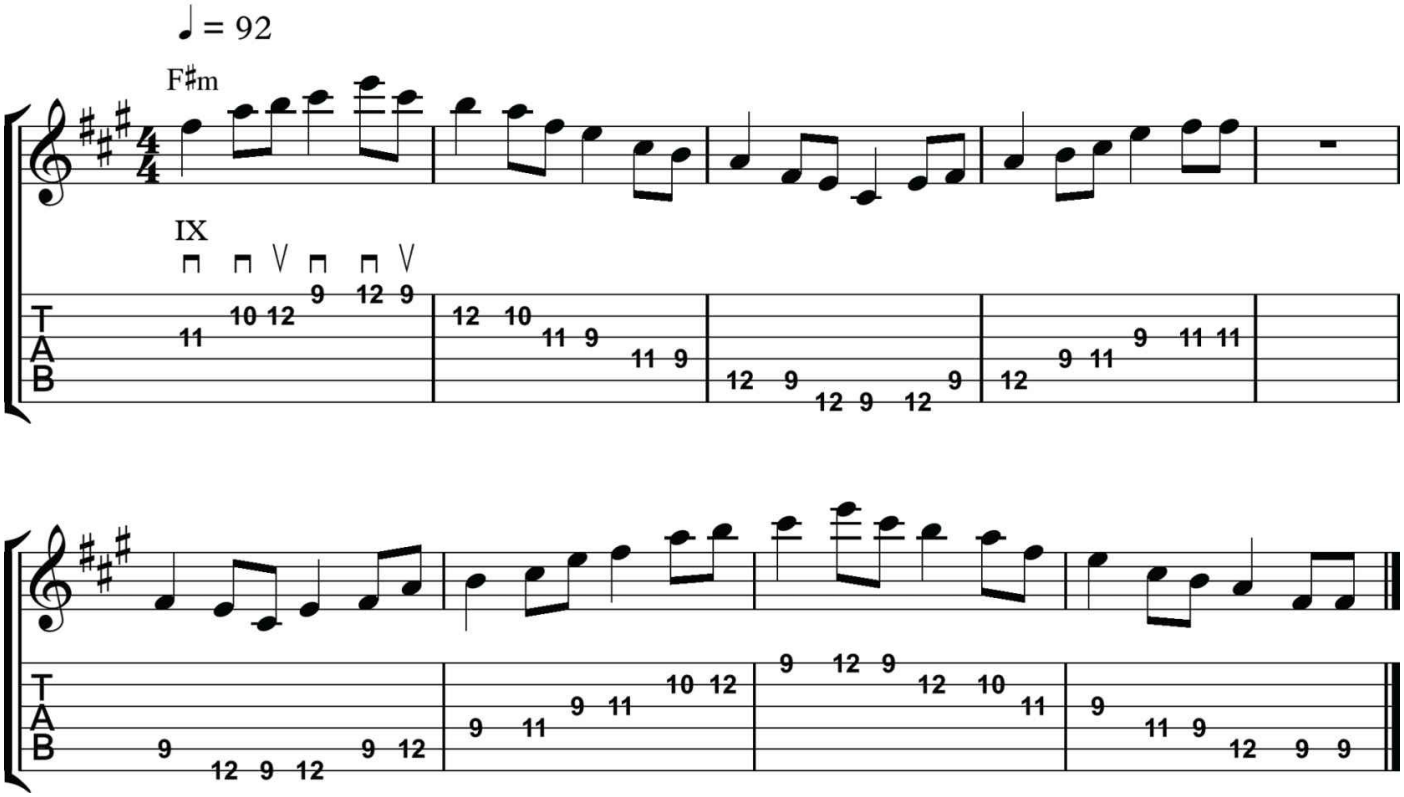
Playing Min Pent A1, Exercise 1 (in Dm)



Playing Min Pent A1, Exercise 2 (in Am)

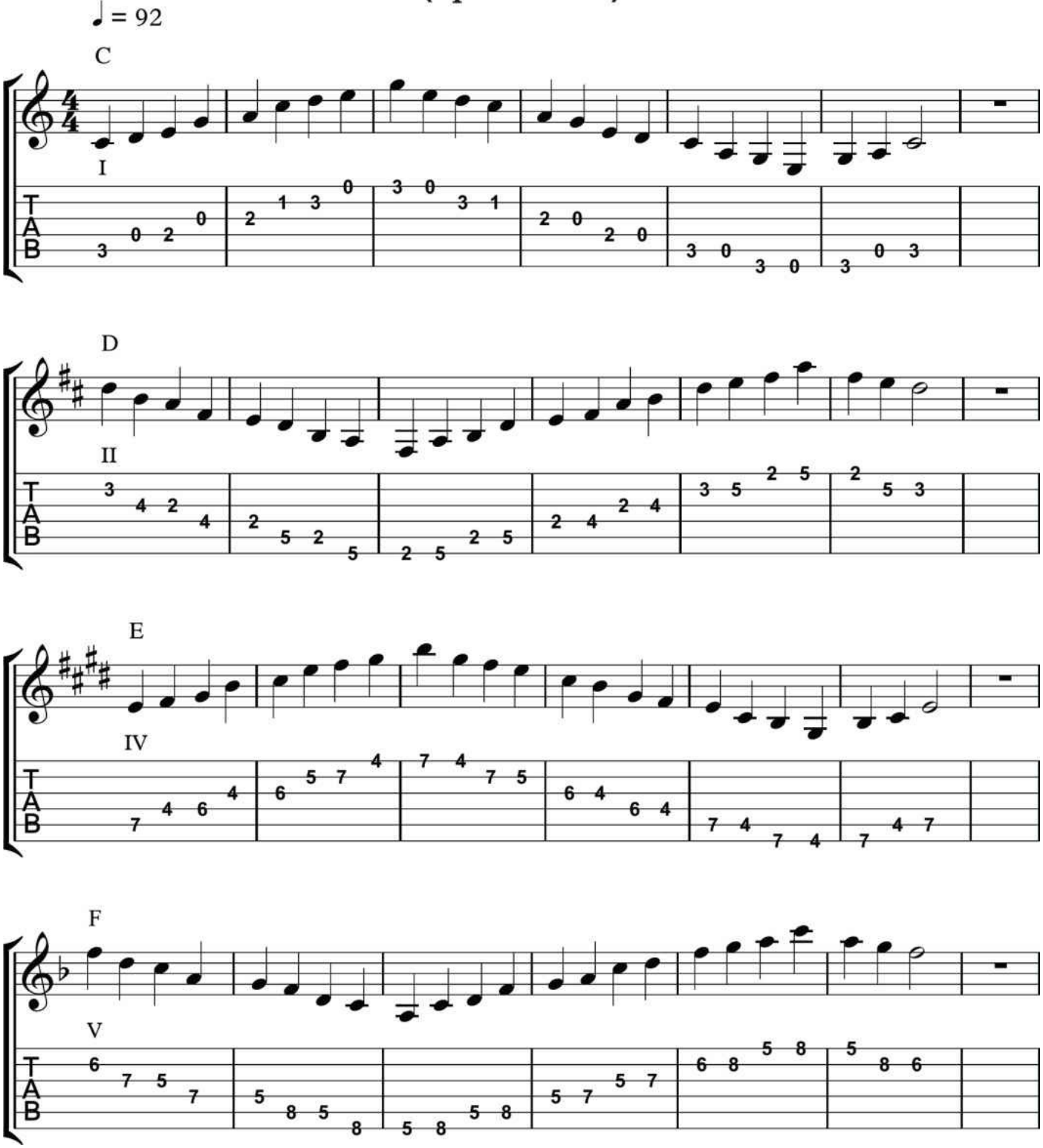


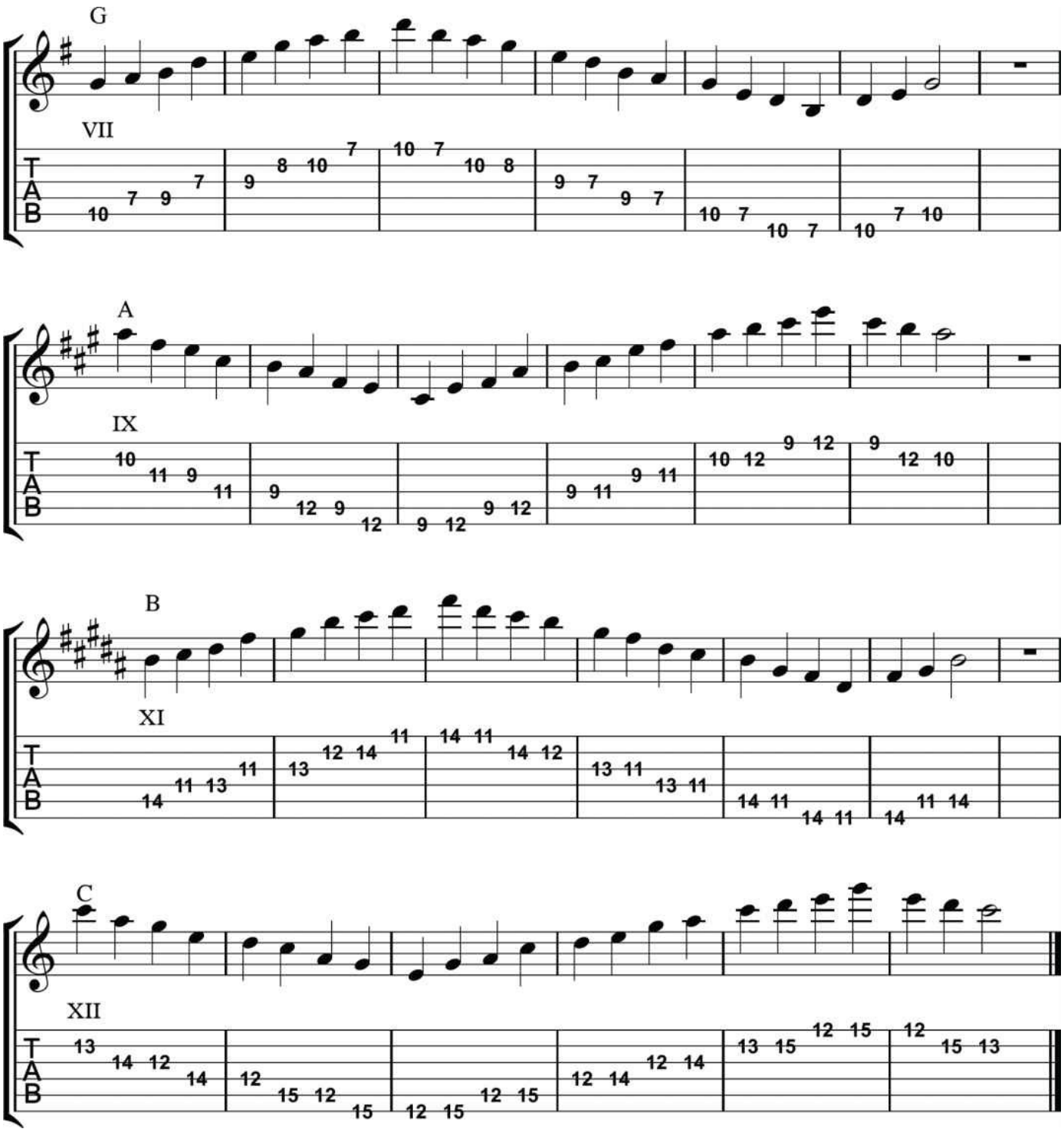
Playing Min Pent A1, Exercise 3 (in F♯m)



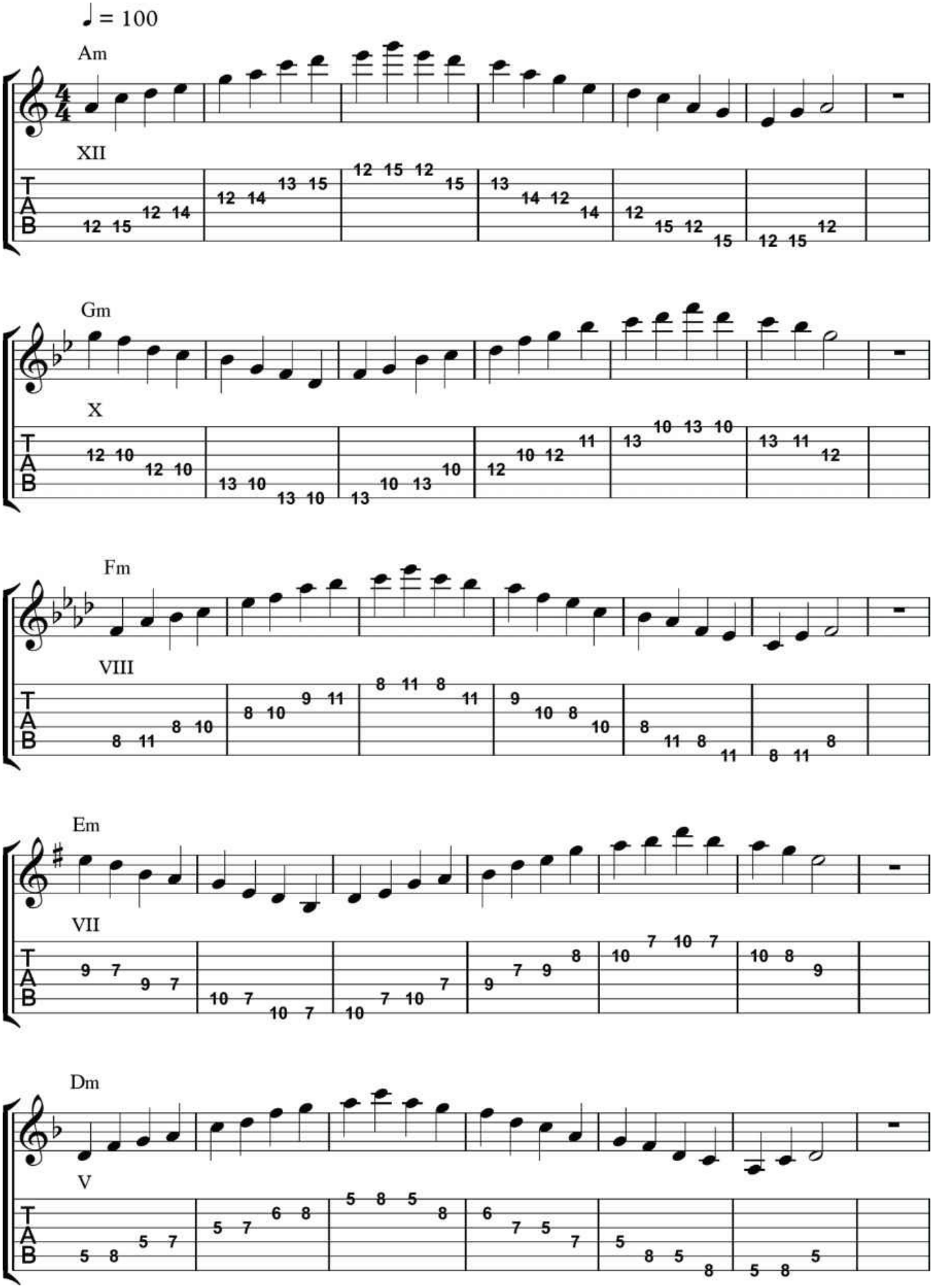
The next few exercises will help you get accustomed to playing these new pentatonic scales up and down the neck of the guitar, starting from both low and high roots. Because each of the major scales correlates to a major chord, and each of the minor scales to a minor chord, the chord names are written above the notes. Use the measure of rest at the end of each line to prepare yourself for the next scale.

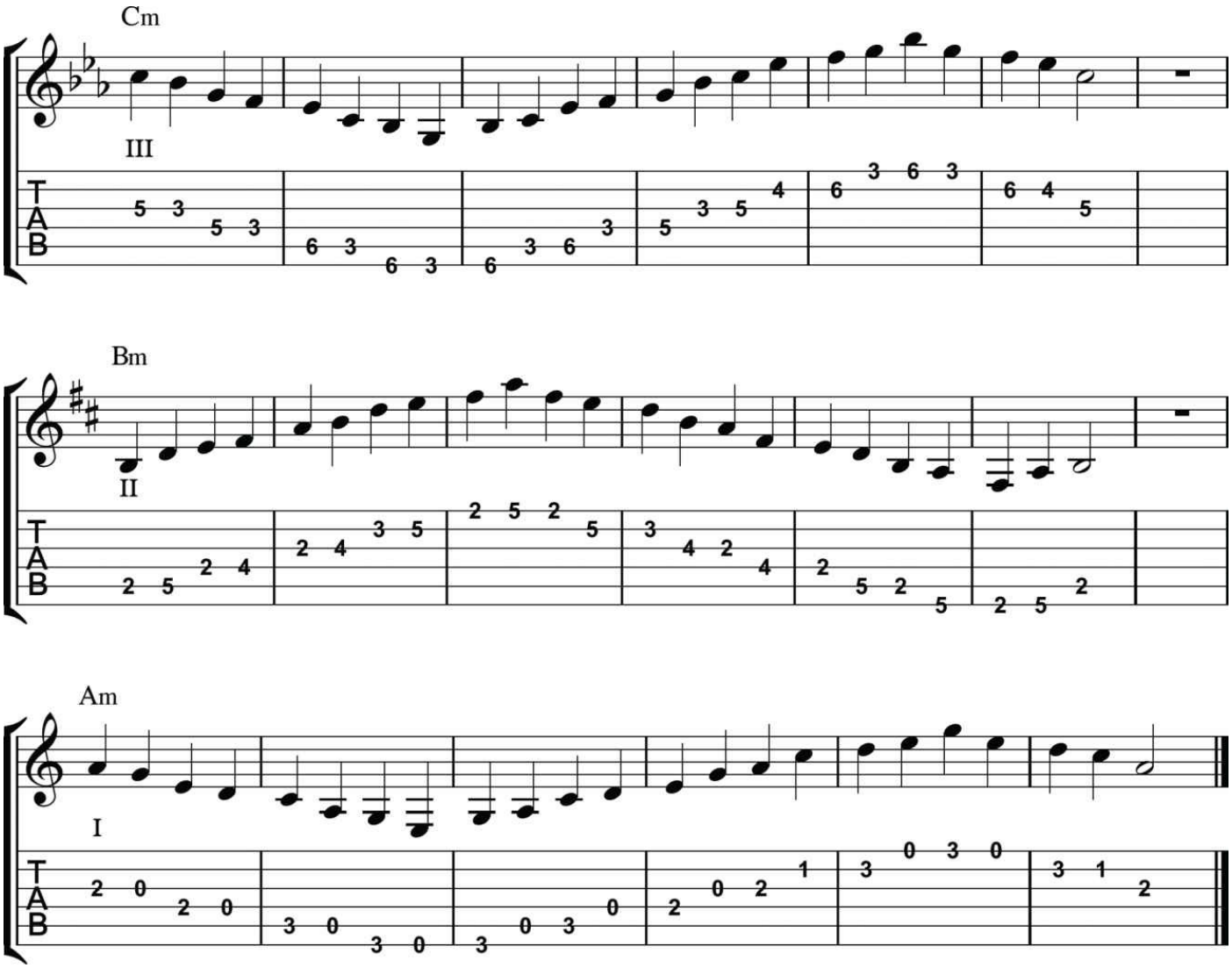
Moving Maj Pent A4
(up the neck)




G
VII
A
IX
B
XI
C
XII

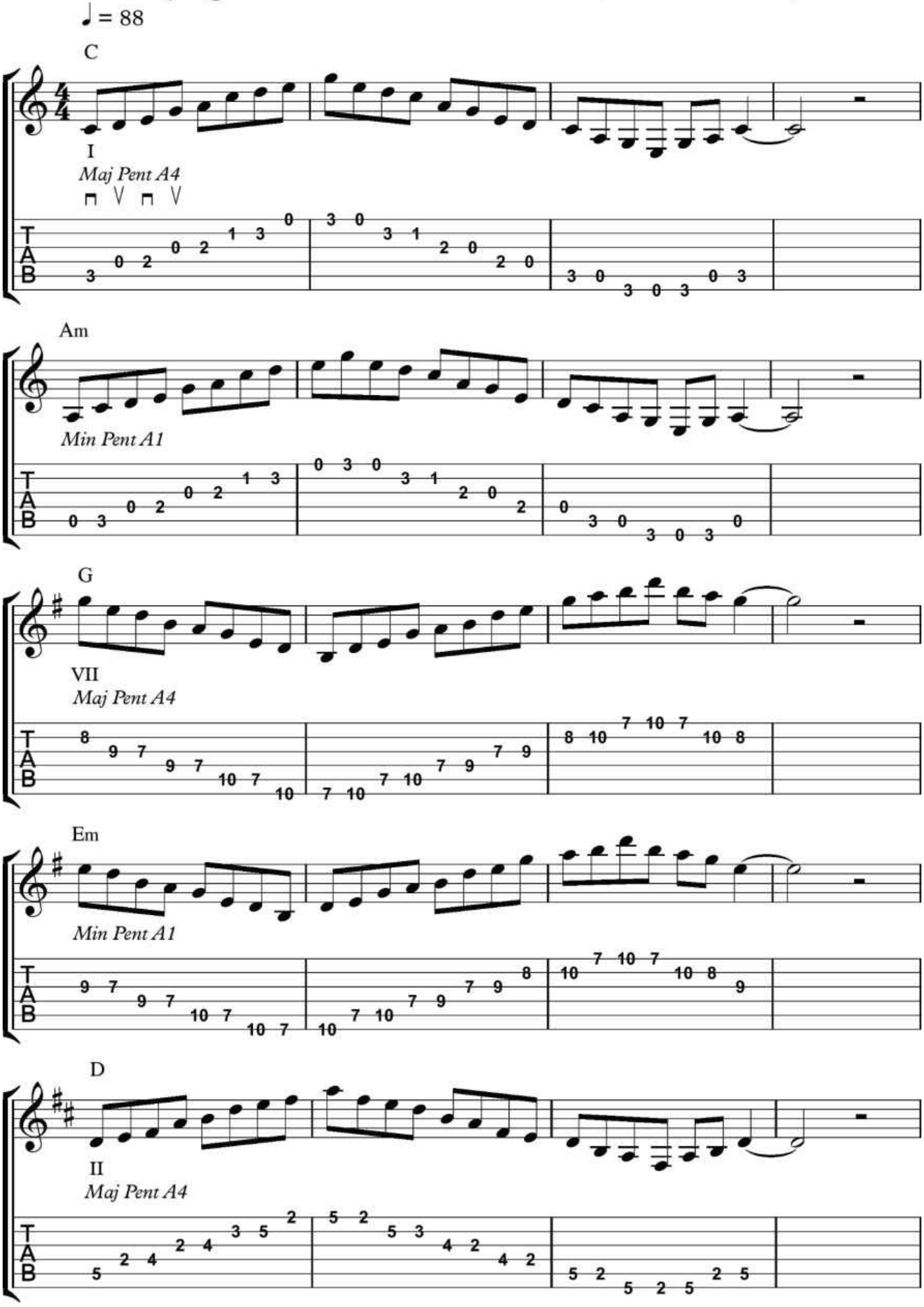
Moving Min Pent A1 (down the neck)

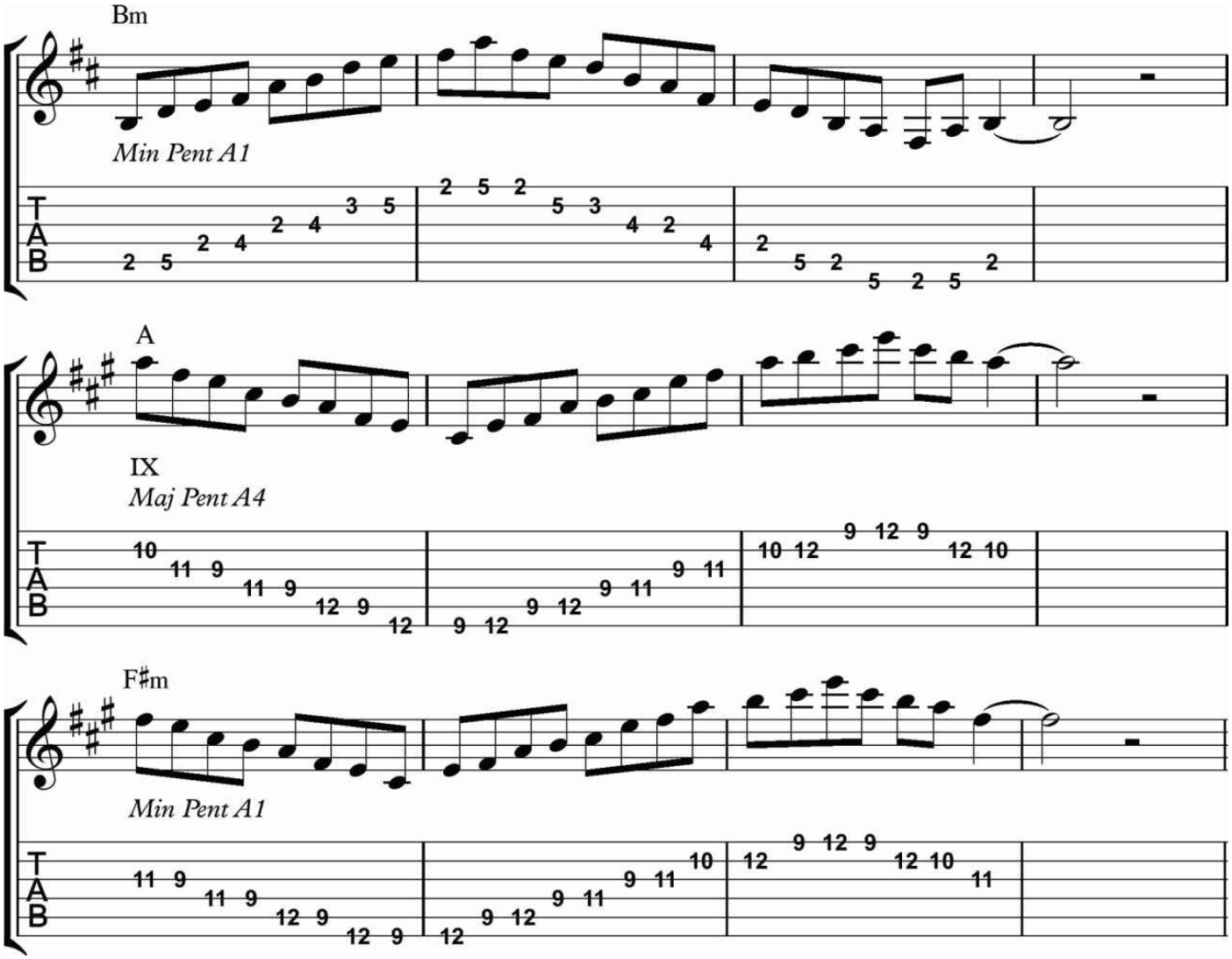




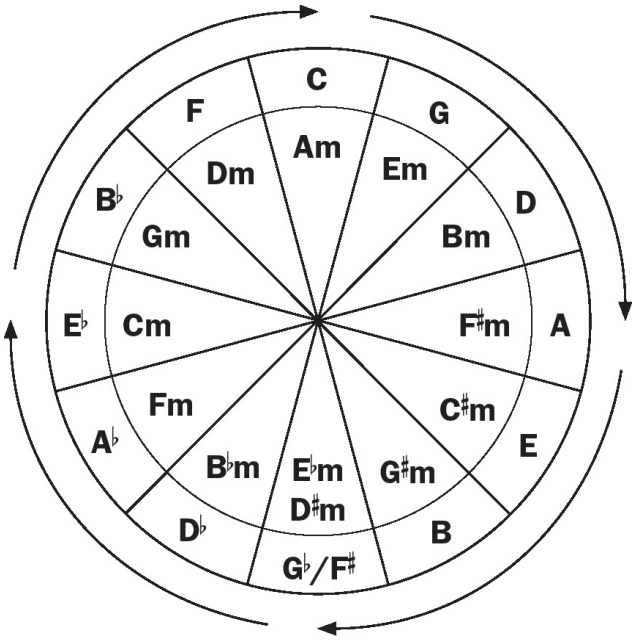
This next exercise will show you how to play relative major and minor pentatonic scales around the circle of fifths, using Maj Pent A4 and Min Pent A1. Remember that you do not have to change hand positions when switching to the relative major/minor pentatonic scale. The first pentatonic scales will start from low roots and as your hand position changes, the next scales will start from high roots. Continuously alternate starting the scales from low and high roots as your hand position changes through the exercise.

Playing Relative Pentatonic Scales (circle of fifths)





Try to continue this exercise as you play clockwise around the entire circle of fifths. Remember to alternate the starting point of your scales from low and high roots as you change hand positions.

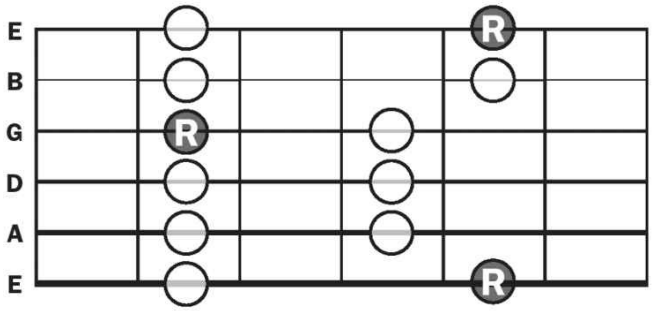


Part 3: Improvising With Two Pentatonic Shapes

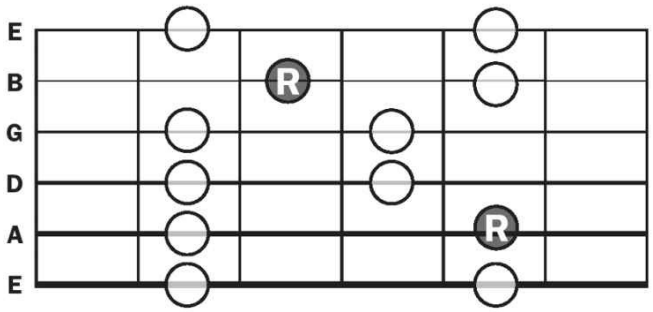
By completing the previous scale exercises at their notated tempos, you should be quite comfortable with Maj Pent A4 and Min Pent A1. The next few pages will show how to apply these scales into your improvised solos over different chord progressions. Below are the diagrams for all scale shapes covered thus far.

Major Pentatonic Scale Shapes

Maj Pent E4

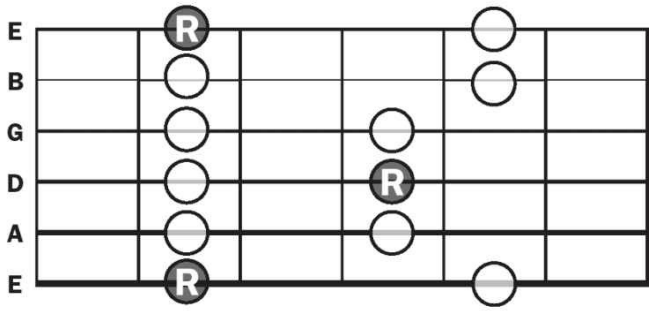


Maj Pent A4

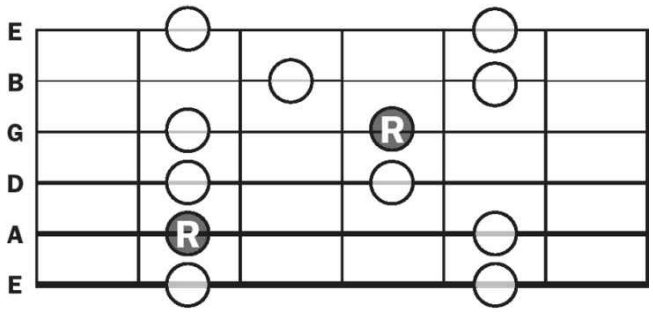


Minor Pentatonic Scale Shapes

Min Pent E1



Min Pent A1



When preparing to improvise over a chord progression with two major and/or minor pentatonic scale shapes, the previously used Three-Step Method becomes a bit more intricate. Preparing roots and scales will now include playing those on the E-string and A-string, along with playing lower shapes and higher shapes.

Three-Step Method for 2 Pentatonic Scale Shapes

Step 1: Play the Roots

- Using half notes, cycle through the different roots of the pentatonic scale shapes by playing two times through the chord progression. First use those scale shapes with E-string roots, then those shapes with A-string roots. Begin playing from the lowest available root in each shape, and leave two beats of rest between each chord.
- Again, using half notes, cycle through the different roots of the pentatonic scale shapes two times through the chord progression. This time, use the lower hand position of each scale shape, then the higher hand position of each scale shape. Begin playing from the lowest available root in each shape, and leave two beats of rest between each chord.

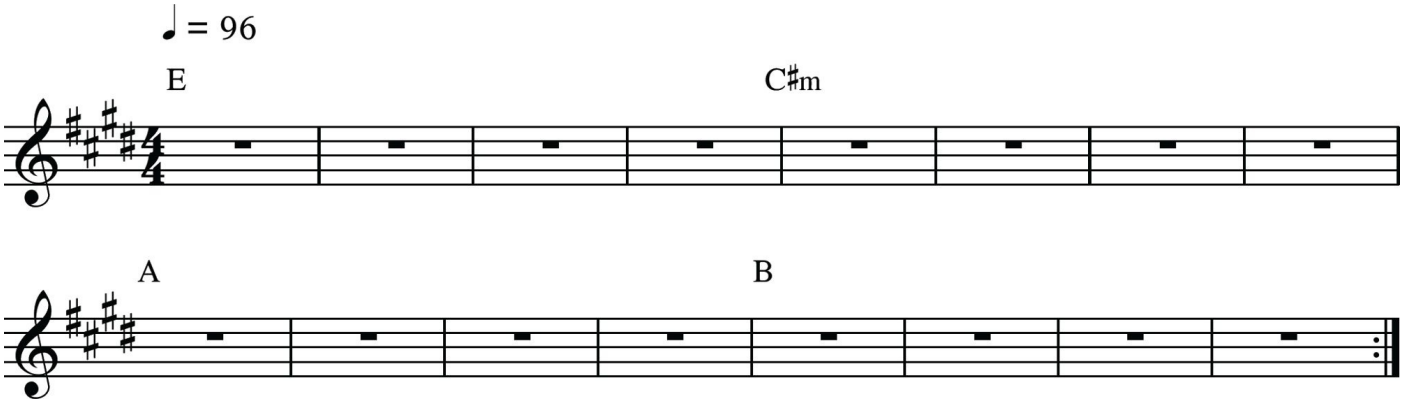
Step 2: Play the Scales

- Using eighth notes, play the pentatonic scales two times through the chord progression. First use those scale shapes with E-string roots, then those shapes with A-string roots. Alternate starting each scale from low roots or high roots, and leave two beats of rest between each scale.
- Again, using eighth notes, play the pentatonic scales two times through the chord progression. This time, use the lower hand position of each scale shape, then the higher hand position of each scale shape. Alternate starting each scale from low roots or high roots, and leave two beats of rest between each scale.

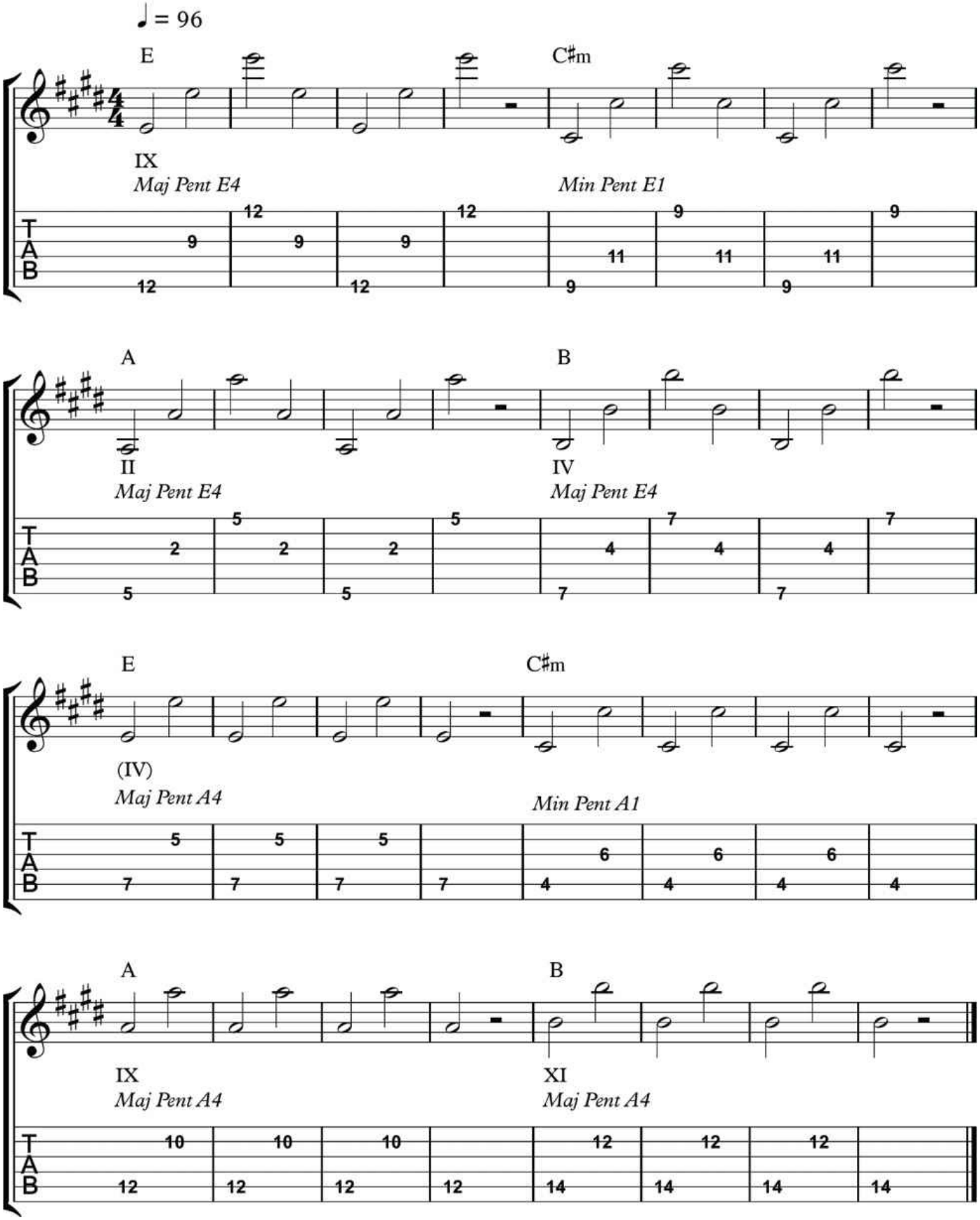
Step 3: Improvise Over the Chord Progression

- Think ahead to keep track of when the chords are about to switch.
- Use rhythmic and melodic motifs.
- Start your solo with lower shapes (and notes) and end your solo with higher shapes (and notes) to help the solo gradually build and become more intense.

This method will now be applied to the following chord progression:

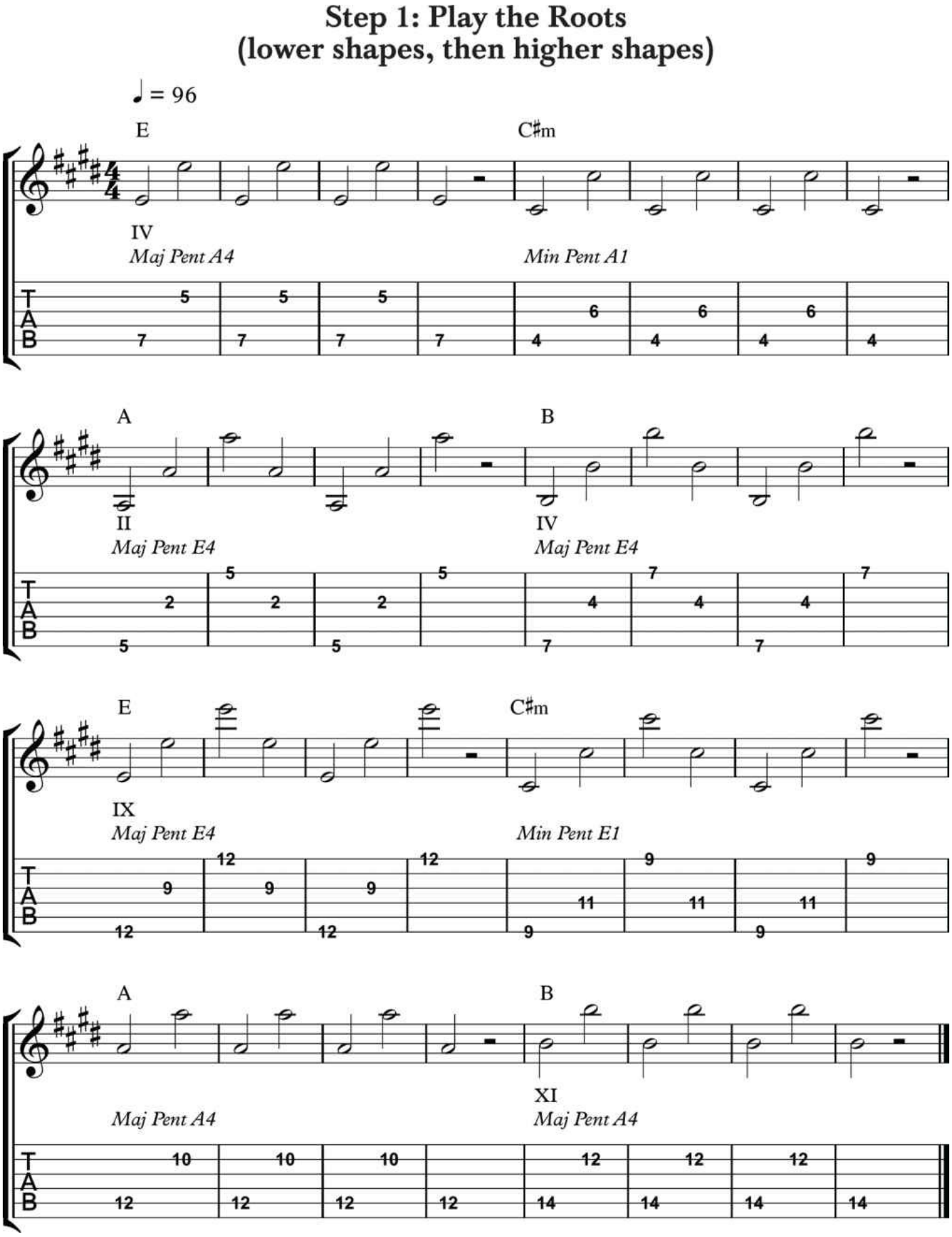


Step 1: Play the Roots
(E-string rooted shapes, then A-string rooted shapes)

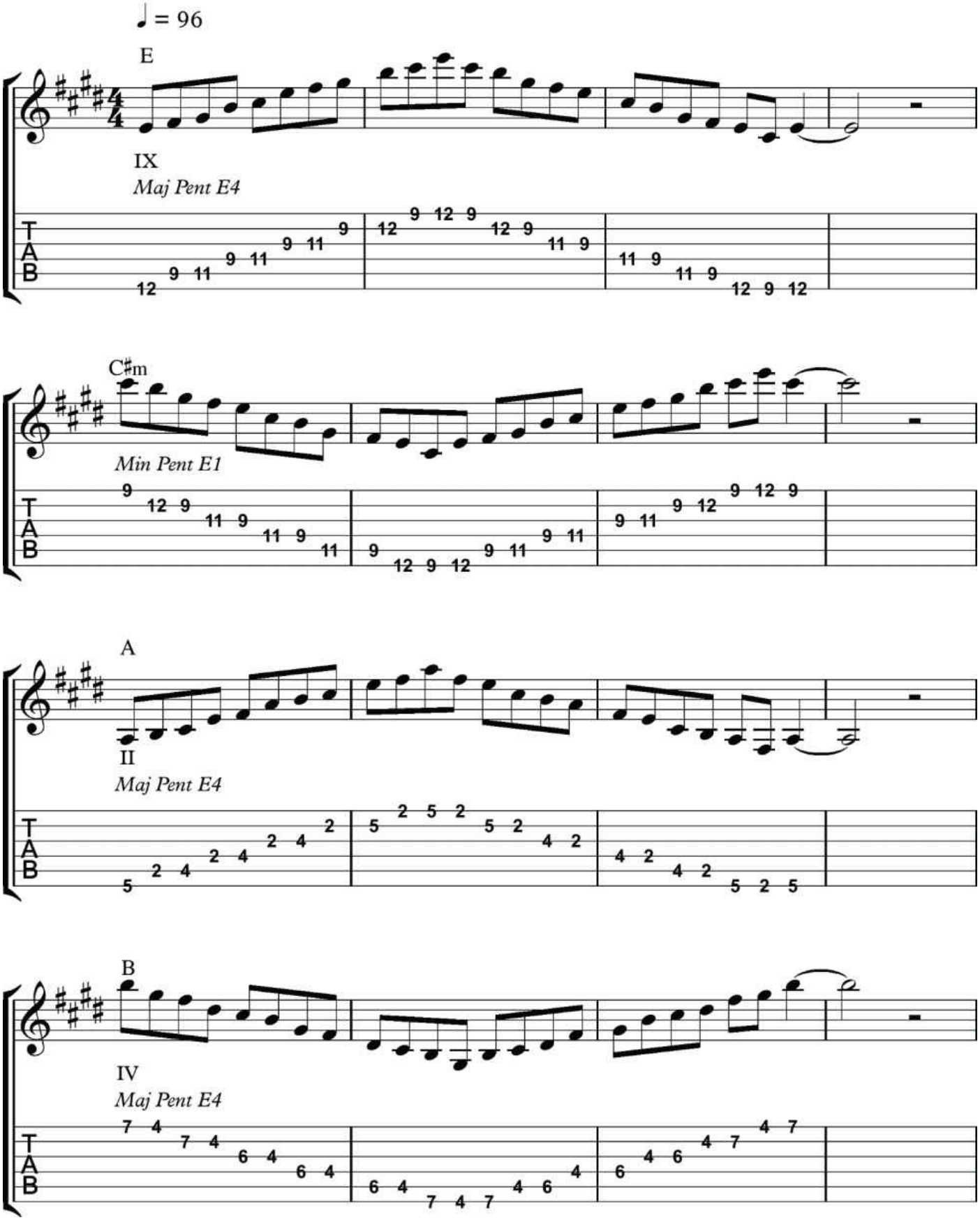


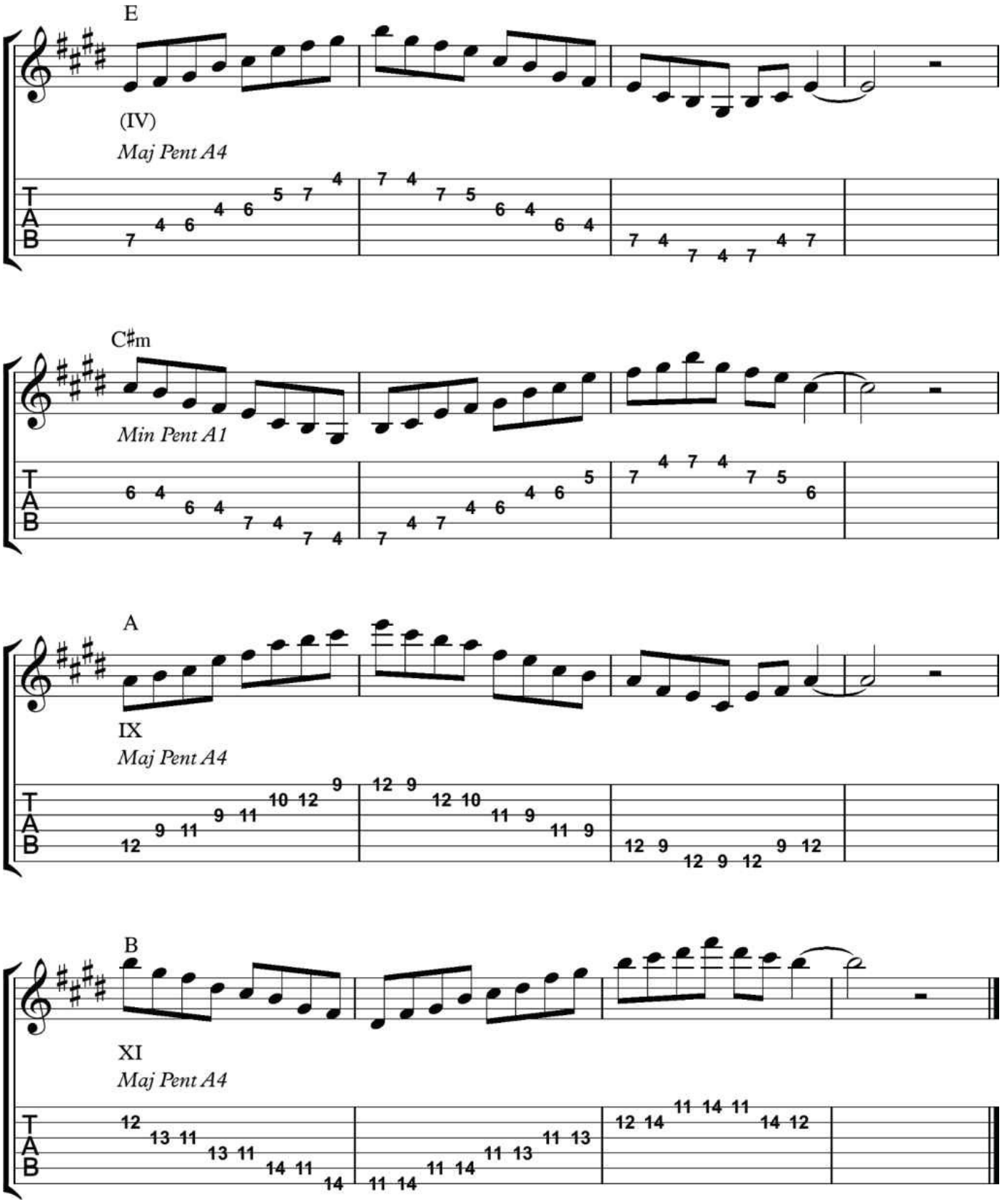
The next exercise should begin to show the incredible value of using two scale shapes when improvising. While using the higher hand position scale shapes, your hand position will remain the same for the E major chord, C-sharp minor chord, and A major chord. This will serve as a much simpler method of improvising, as opposed to constantly moving up

and down the neck.

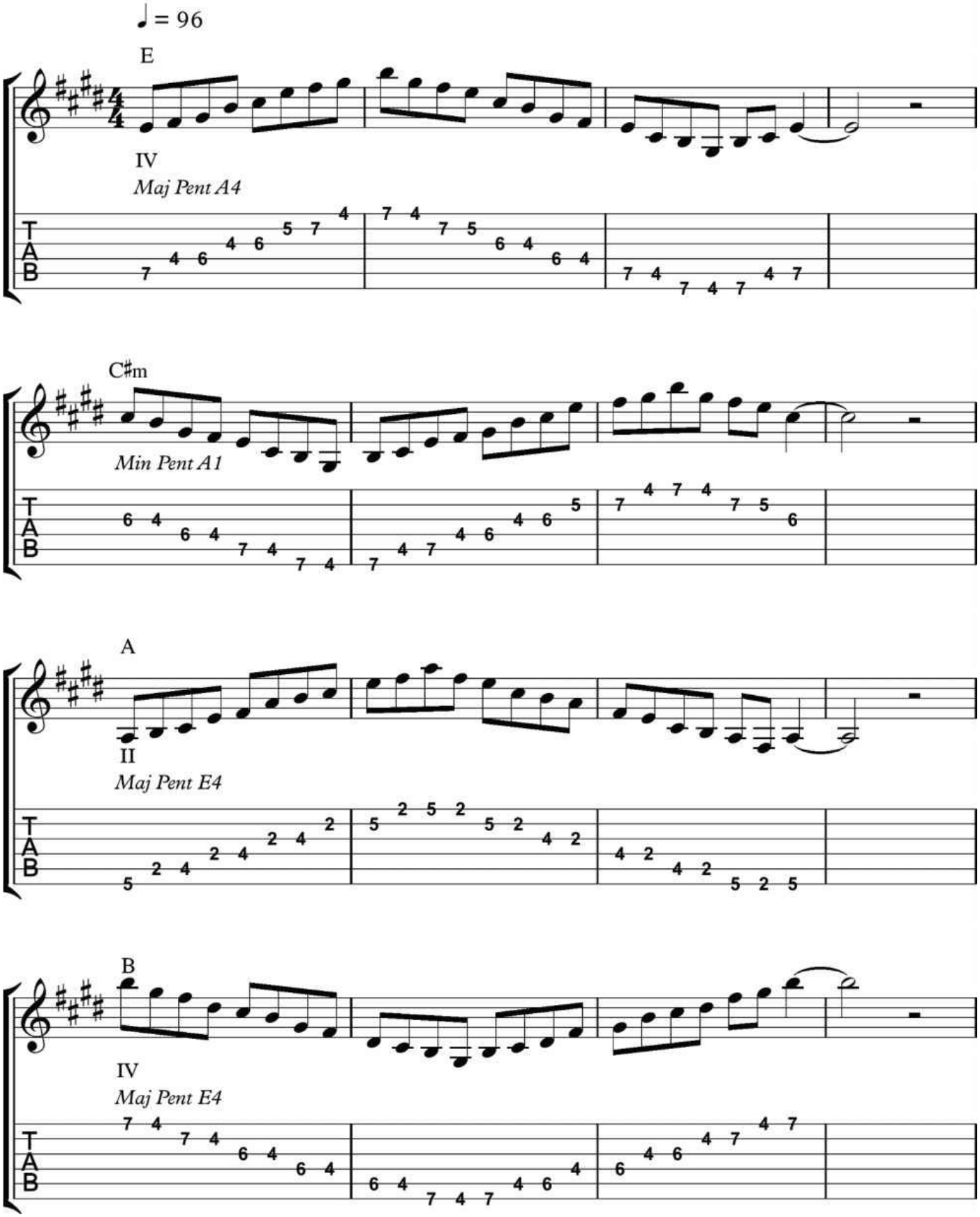


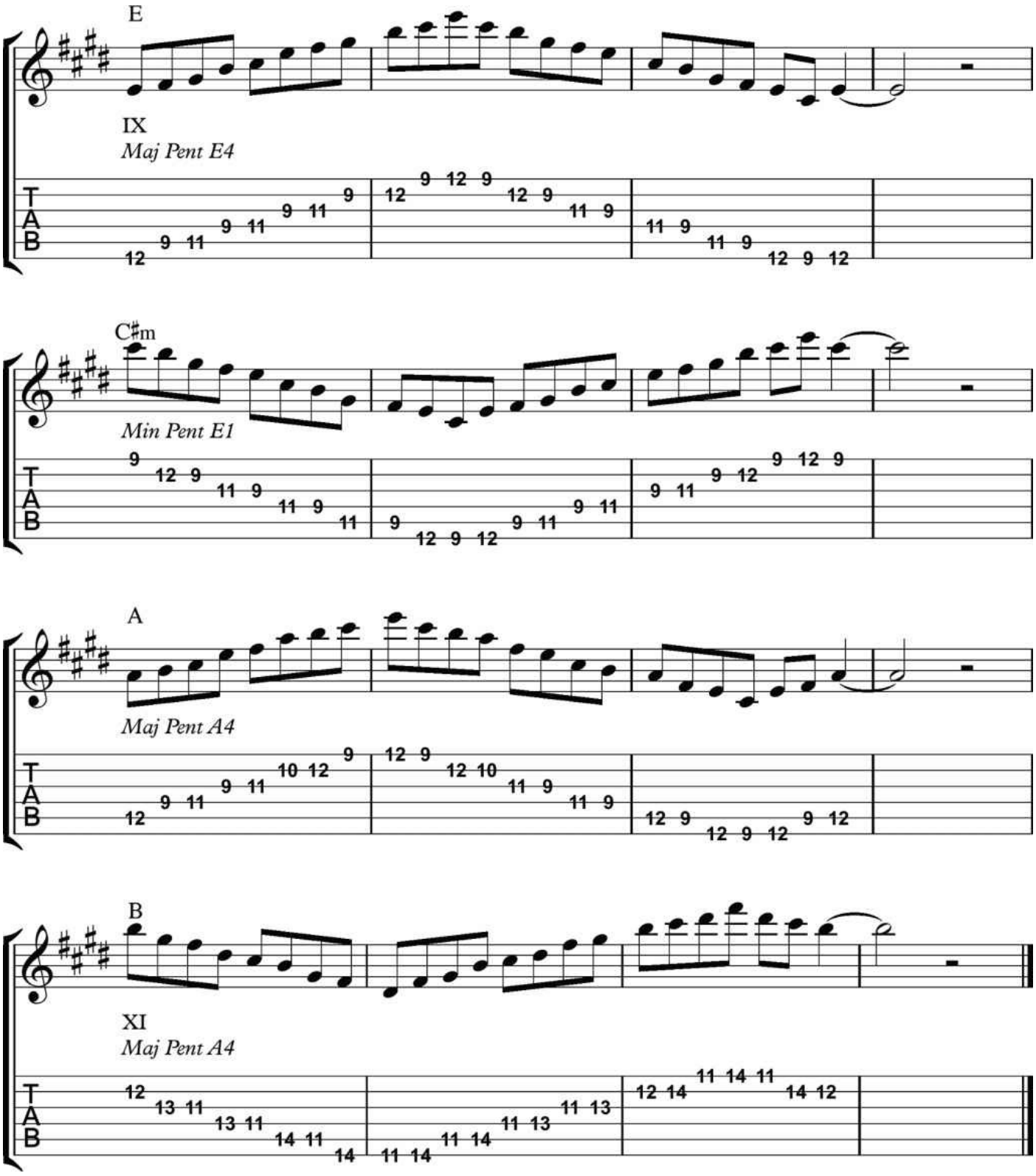
Step 2: Play the Scales
(E-string rooted shapes, then A-string rooted shapes)



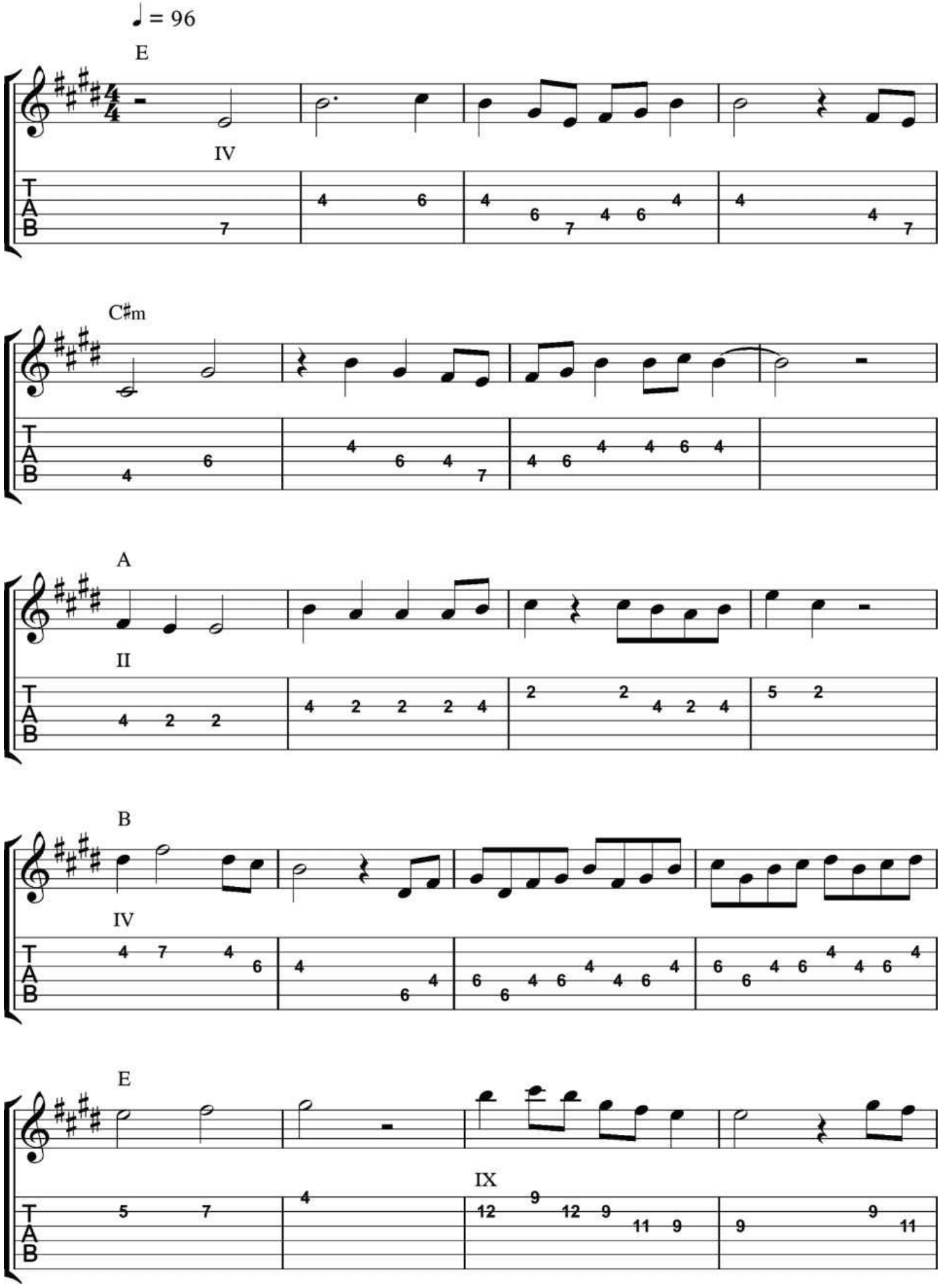

E
(IV)
Maj Pent A4
C♯m
Min Pent A1
A
IX
Maj Pent A4
B
XI
Maj Pent A4
T
A
B

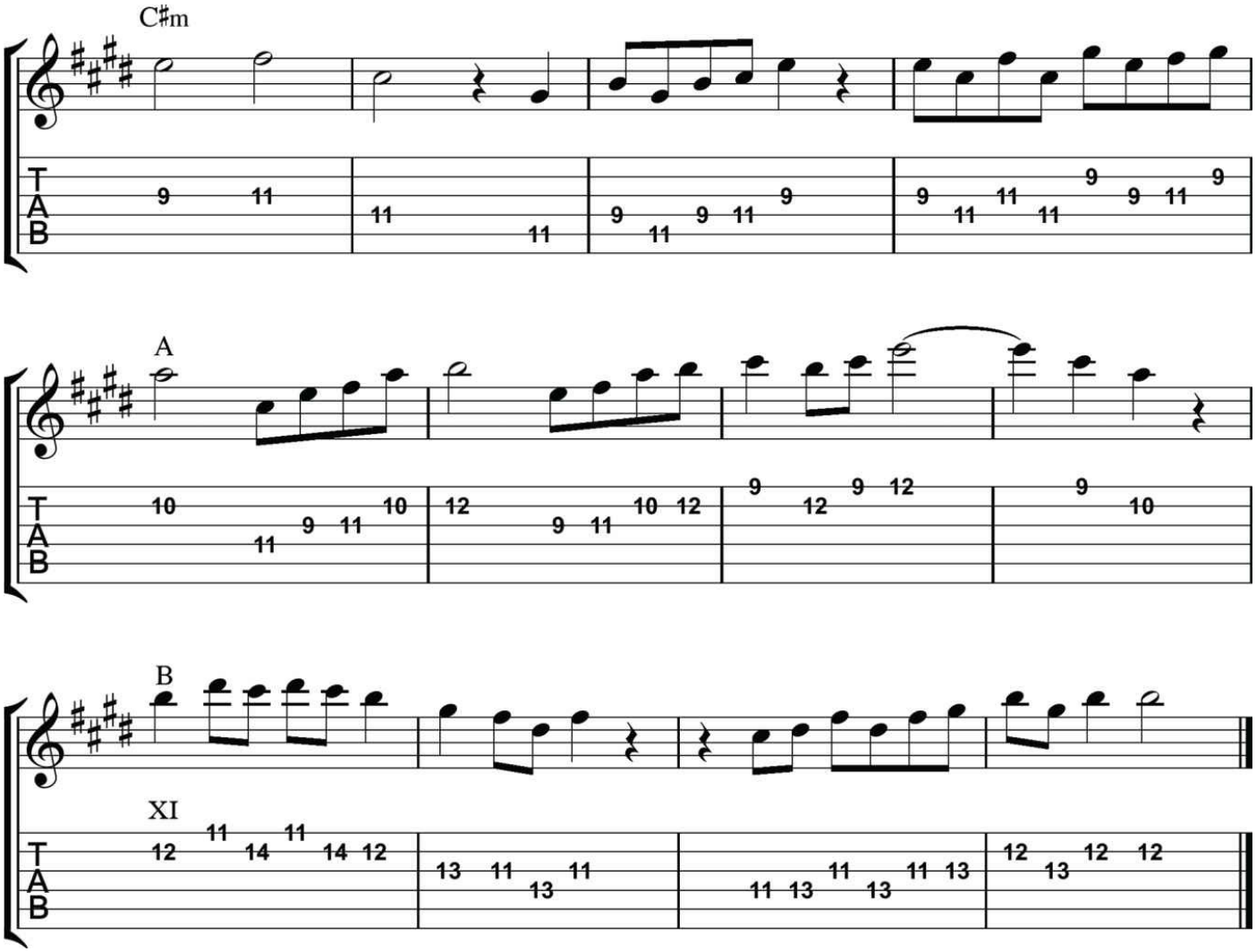
Step 2: Play the Scales
(lower shapes, then higher shapes)




E
IX
Maj Pent E4
C♯m
Min Pent E1
A
Maj Pent A4
B
XI
Maj Pent A4

Step 3: Improvise Over the Chord Progression





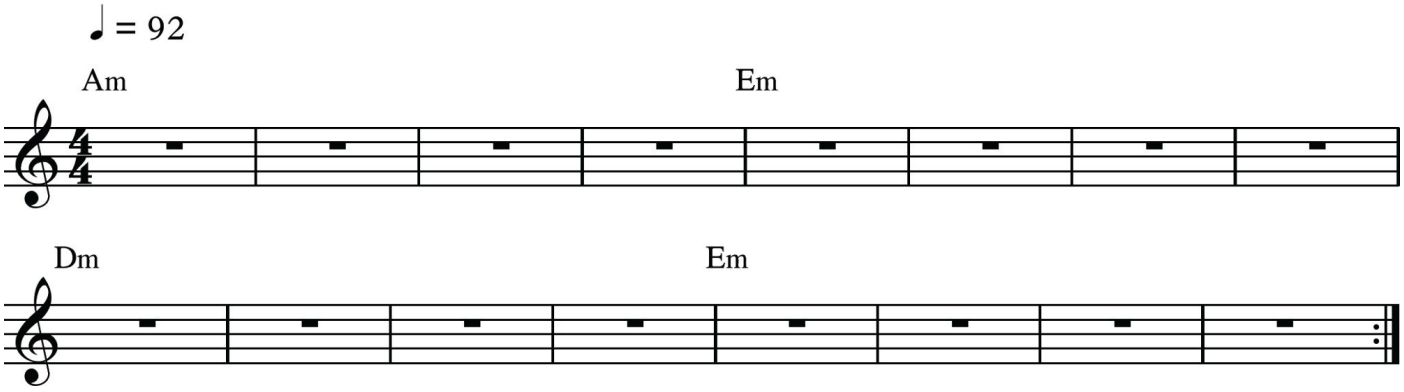
Now try applying this Three-Step Method to the following chord progressions. Work on each one until you can comfortably improvise over it.

Step 1: Play the Roots (E-string, A-string, low shapes, high shapes)

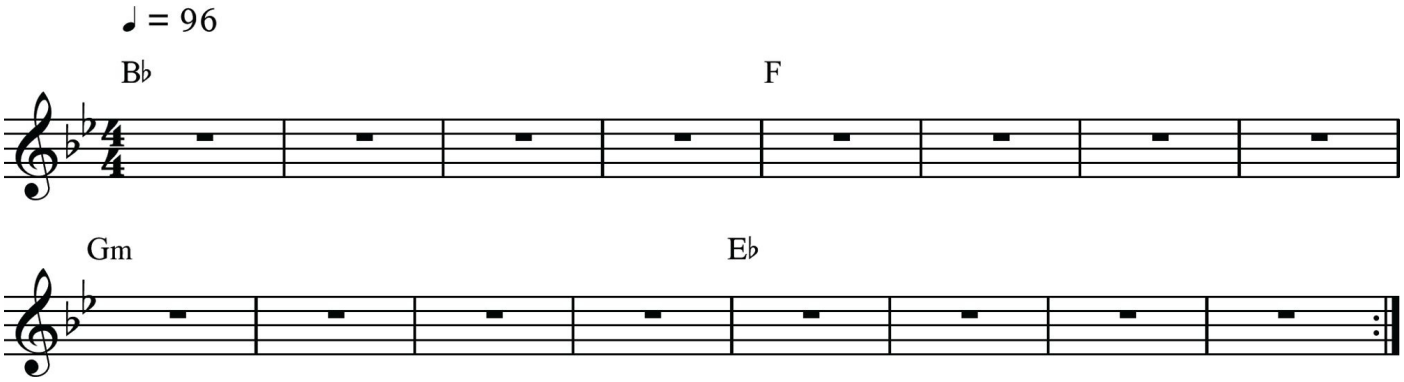
Step 2: Play the Scales (E-string, A-string, low shapes, high shapes)

Step 3: Improvise Over the Chord Progression

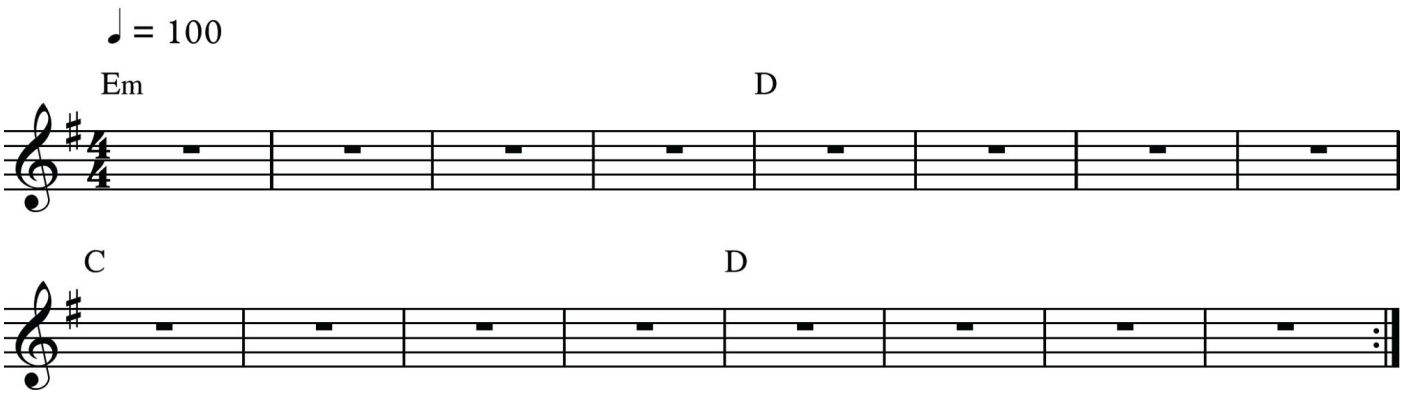
Improvising With Two Pentatonic Shapes, Exercise 1



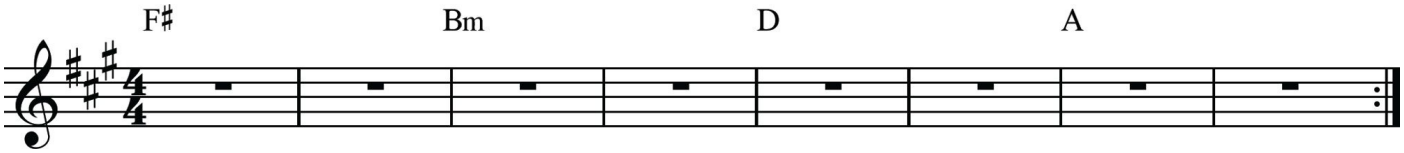
Improvising With Two Pentatonic Shapes, Exercise 2



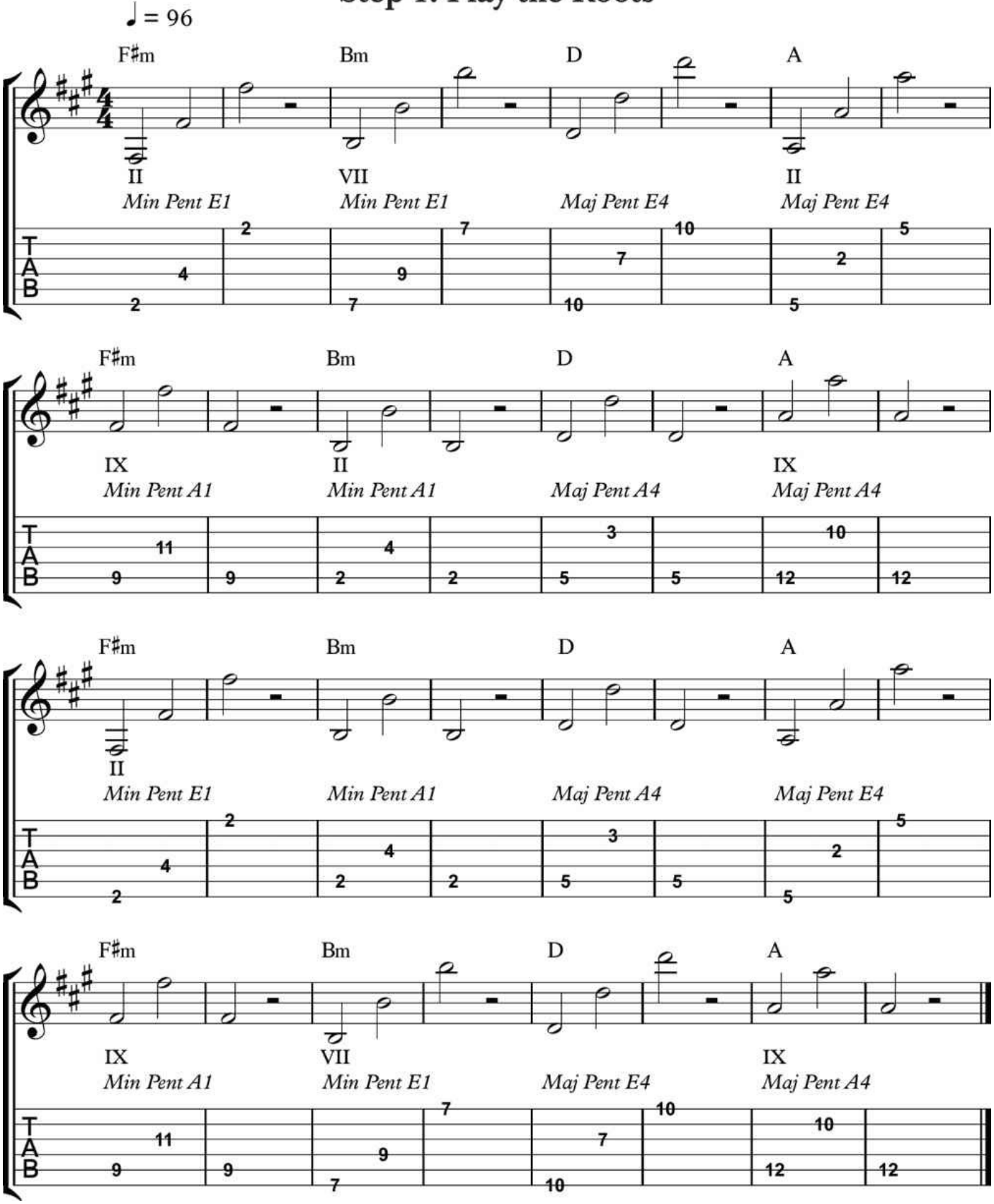
Improvising With Two Pentatonic Shapes, Exercise 3



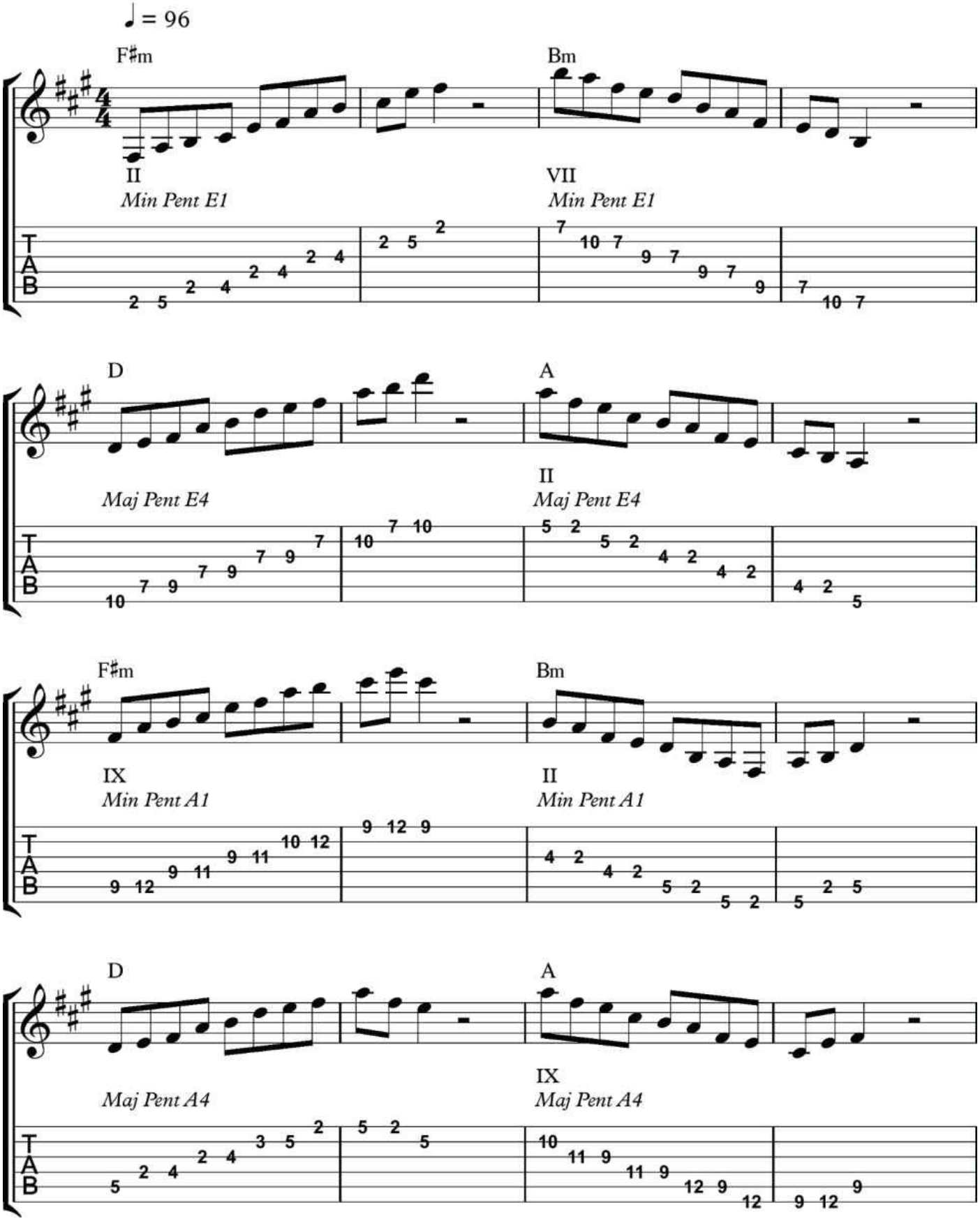
Here is the same Three-Step Method applied to a chord progression with each chord having a duration of two measures. The different aspects of Step 1 have been combined to now function as one long step which includes the roots of E-string rooted shapes, A-string rooted shapes, lower shapes and higher shapes. The same combination has been used for Step 2, using the scales.

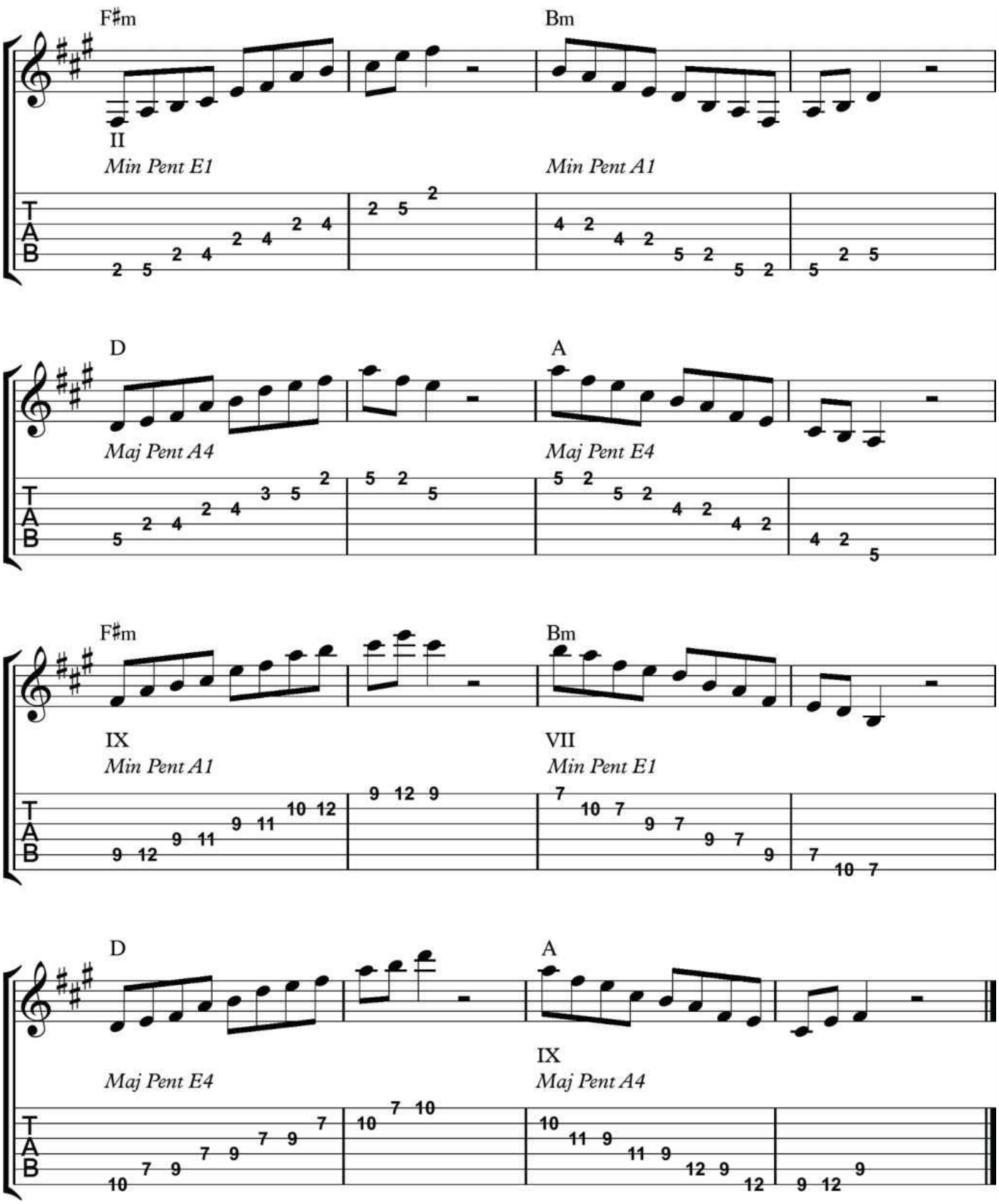


Step 1: Play the Roots

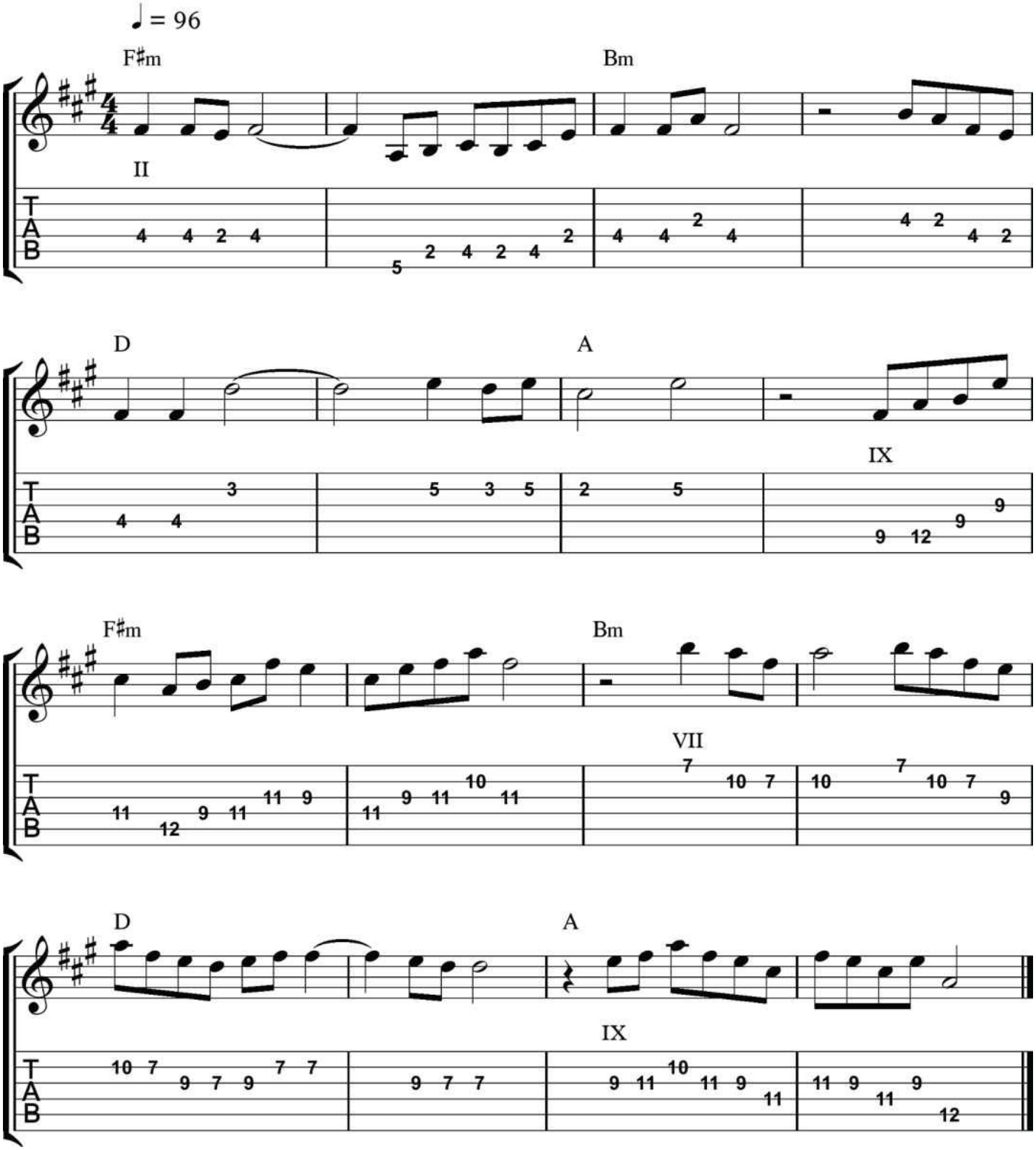


Step 2: Play the Scales




F♯m
Bm
II
Min Pent E1
Min Pent A1
D
A
Maj Pent A4
Maj Pent E4
F♯m
Bm
IX
Min Pent A1
VII
Min Pent E1
D
A
IX
Maj Pent E4
Maj Pent A4
T
A
B

Step 3: Improvise Over the Chord Progression



Now try applying this Three-Step Method to the following chord progressions. Work on each one until you can comfortably improvise over it.

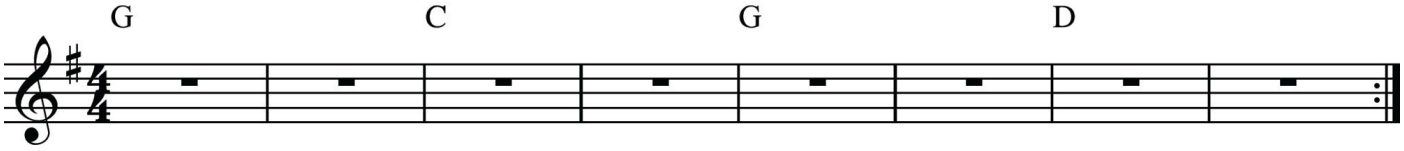
Step 1: Play the Roots (cycle through)

Step 2: Play the Scales (alternate starting from low roots and high roots)

Step 3: Improvise Over the Chord Progression

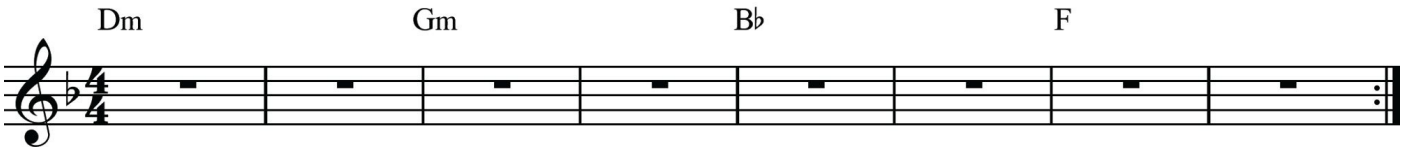
Improvising With Two Pentatonic Shapes, Exercise 4

♩ = 92



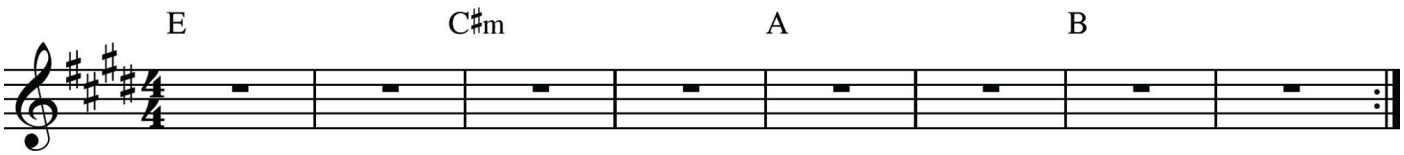
Improvising With Two Pentatonic Shapes, Exercise 5

♩ = 96



Improvising With Two Pentatonic Shapes, Exercise 6

♩ = 100



Chapter 7

Major and Minor Arpeggios

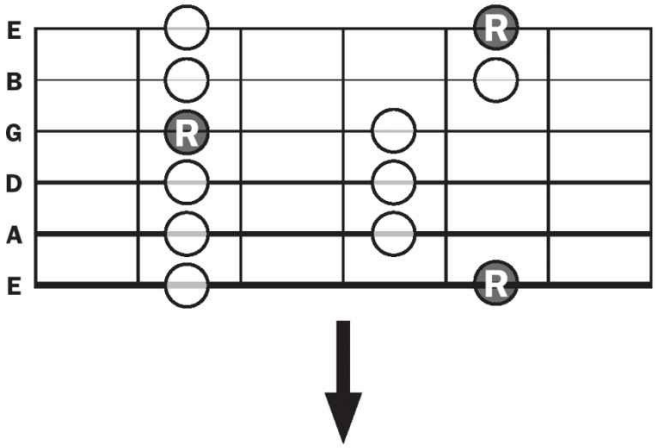
All chords and their appropriate pentatonic scales share a common tone — the root. For example, both the A major pentatonic scale and the A major chord have the root note A. However, there are two other notes of the major and minor chords that are embedded within the pentatonic scales. These notes are evident in the ***arpeggio*** of the chord, which is the notes of the chord played in succession, rather than simultaneously.

Part 1: Major Arpeggios

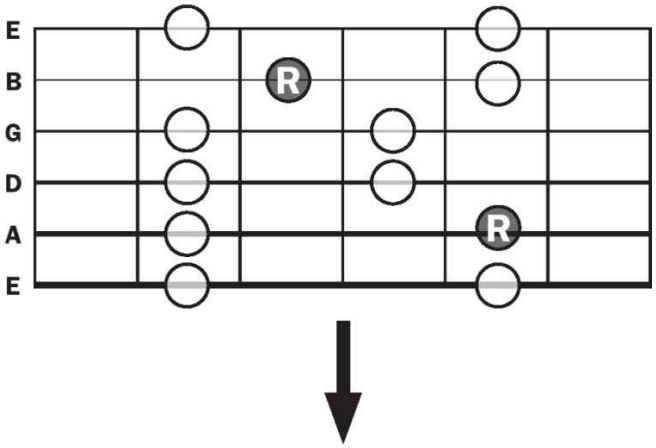
Each major arpeggio contains a sequence of three notes, called the Root, Third, and Fifth. Just like a scale shape, this sequence repeats within the available range of notes in a hand position. The diagrams below will show the appropriate major arpeggios embedded within Maj Pent E4 and Maj Pent A4.

Major Arpeggio = Root (R) Third (3) Fifth (5)

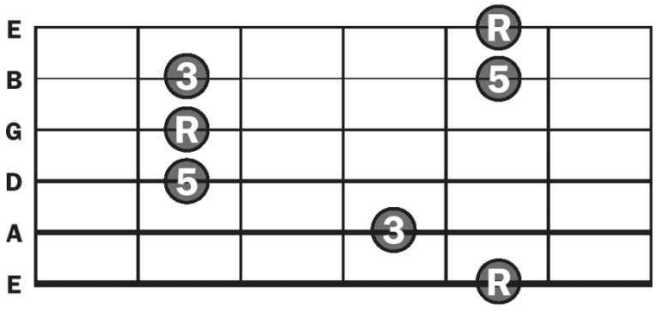
Major Pentatonic E4



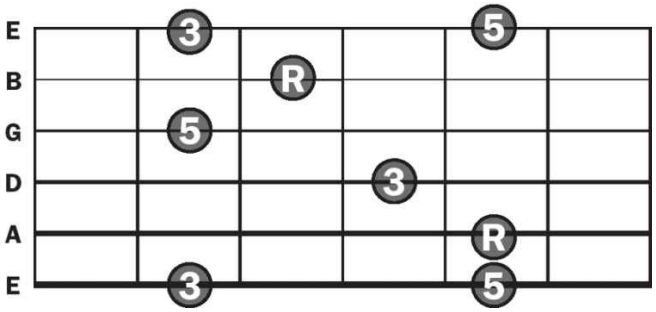
Major Pentatonic A4



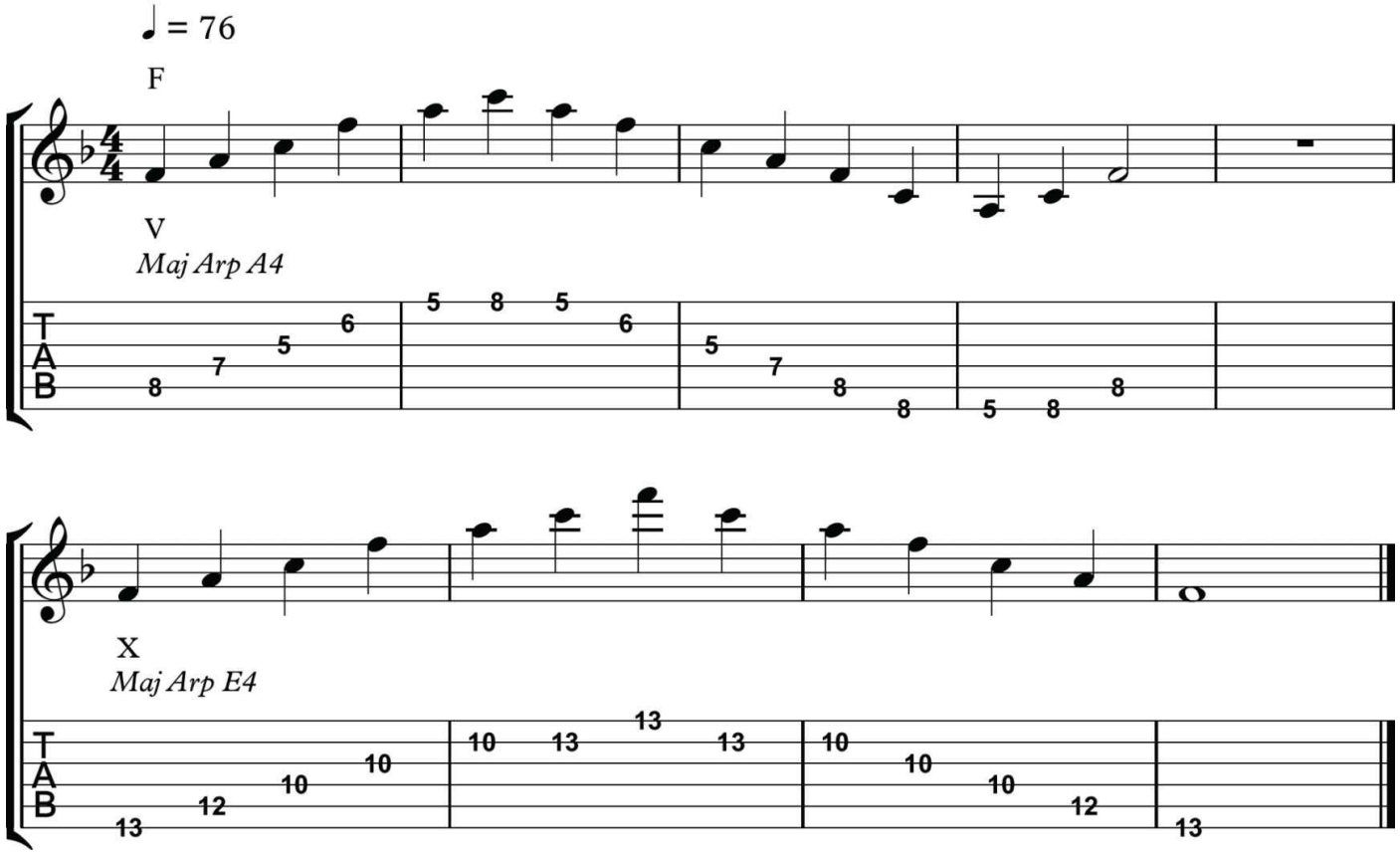
Major Arpeggio E4



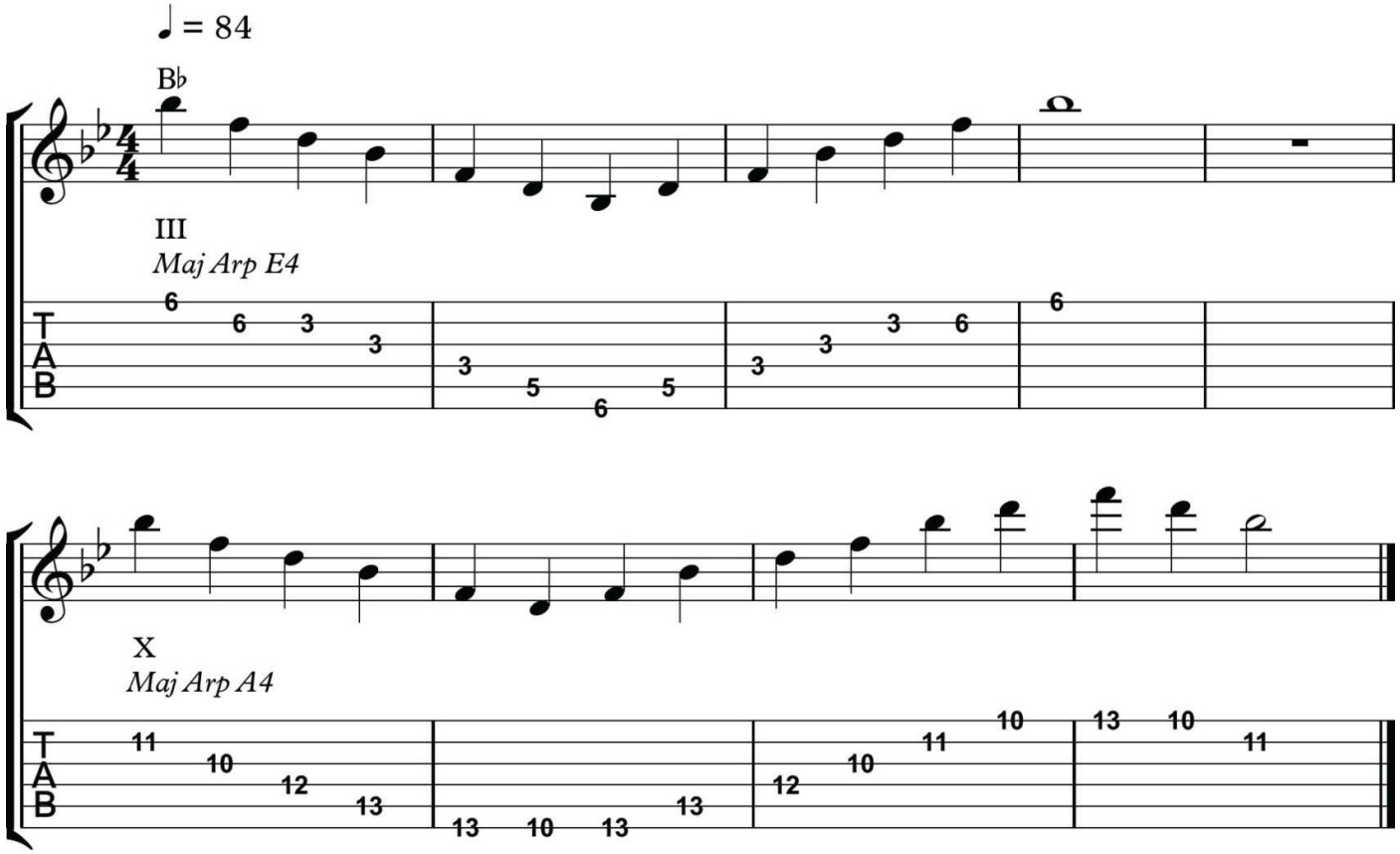
Major Arpeggio A4



Playing Maj Arpeggios, Exercise 1 (in F)

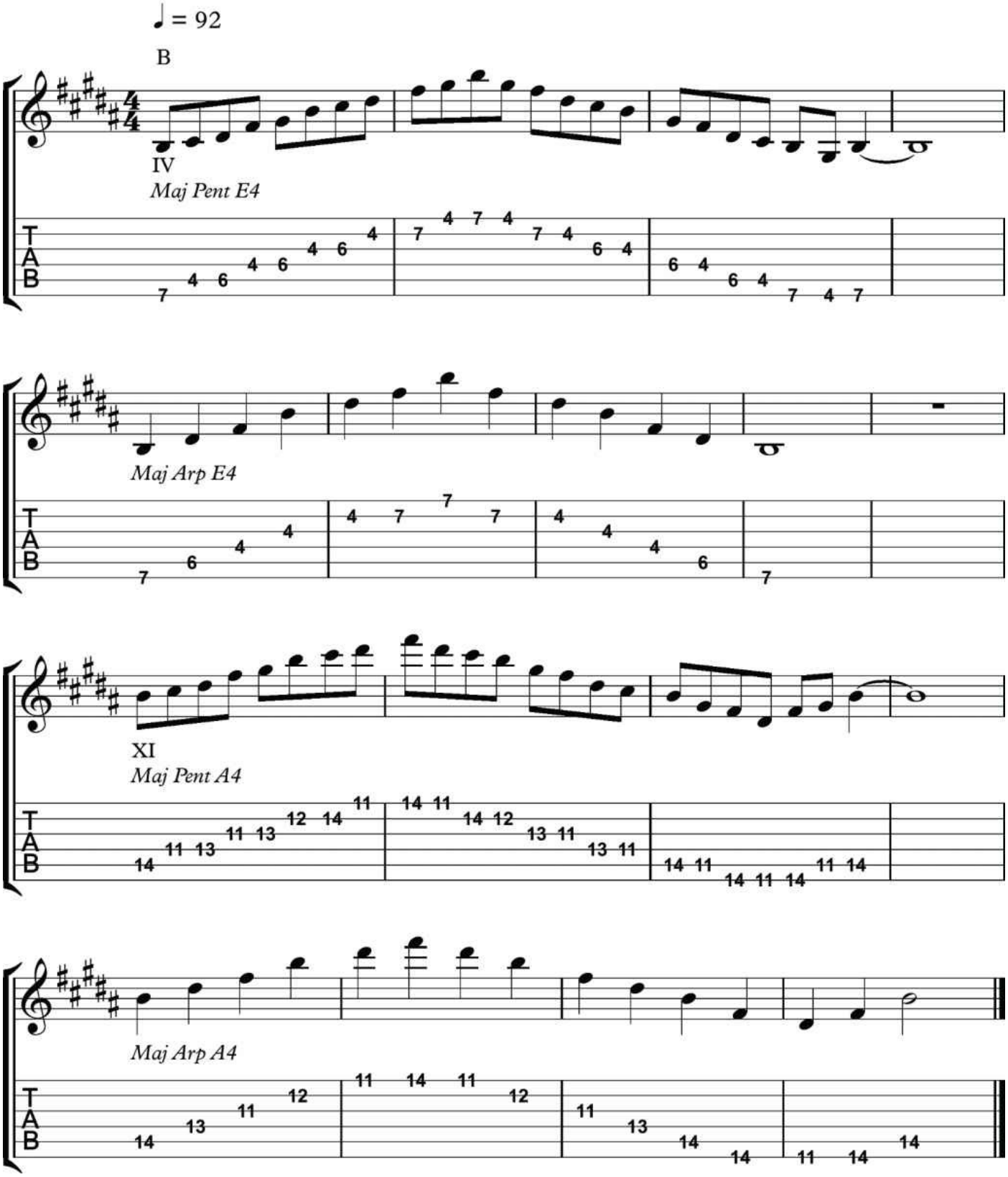


Playing Maj Arpeggios, Exercise 2 (in B♭)

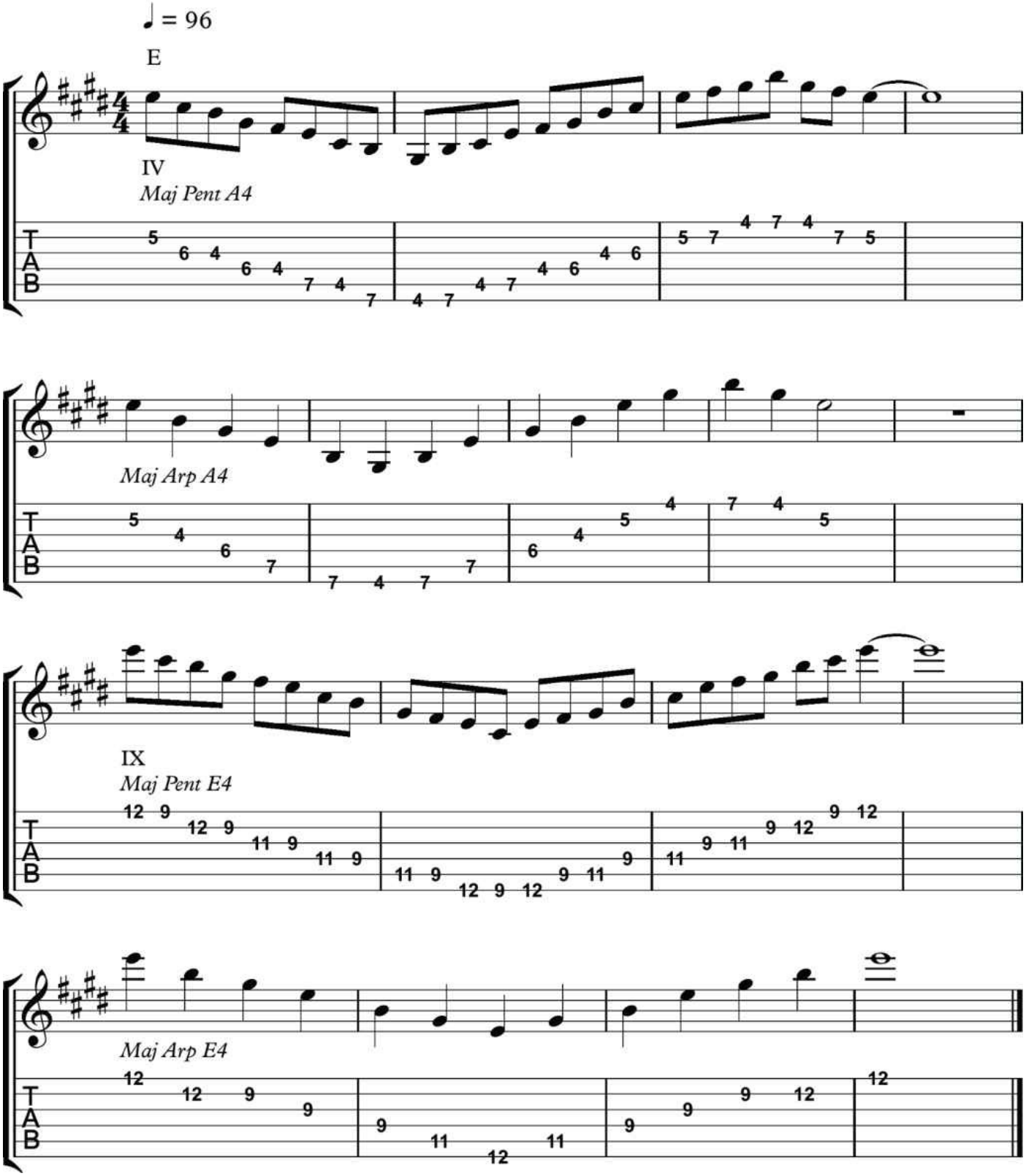


Just like the root of a scale, the other notes of the arpeggio are great notes to hold when improvising, since they are also being played by the chordal instrument. The next few exercises will get you comfortable with playing the major pentatonic scales, followed by their arpeggios.

Playing Maj Pent Scales and Arpeggios, Exercise 1 (in B)

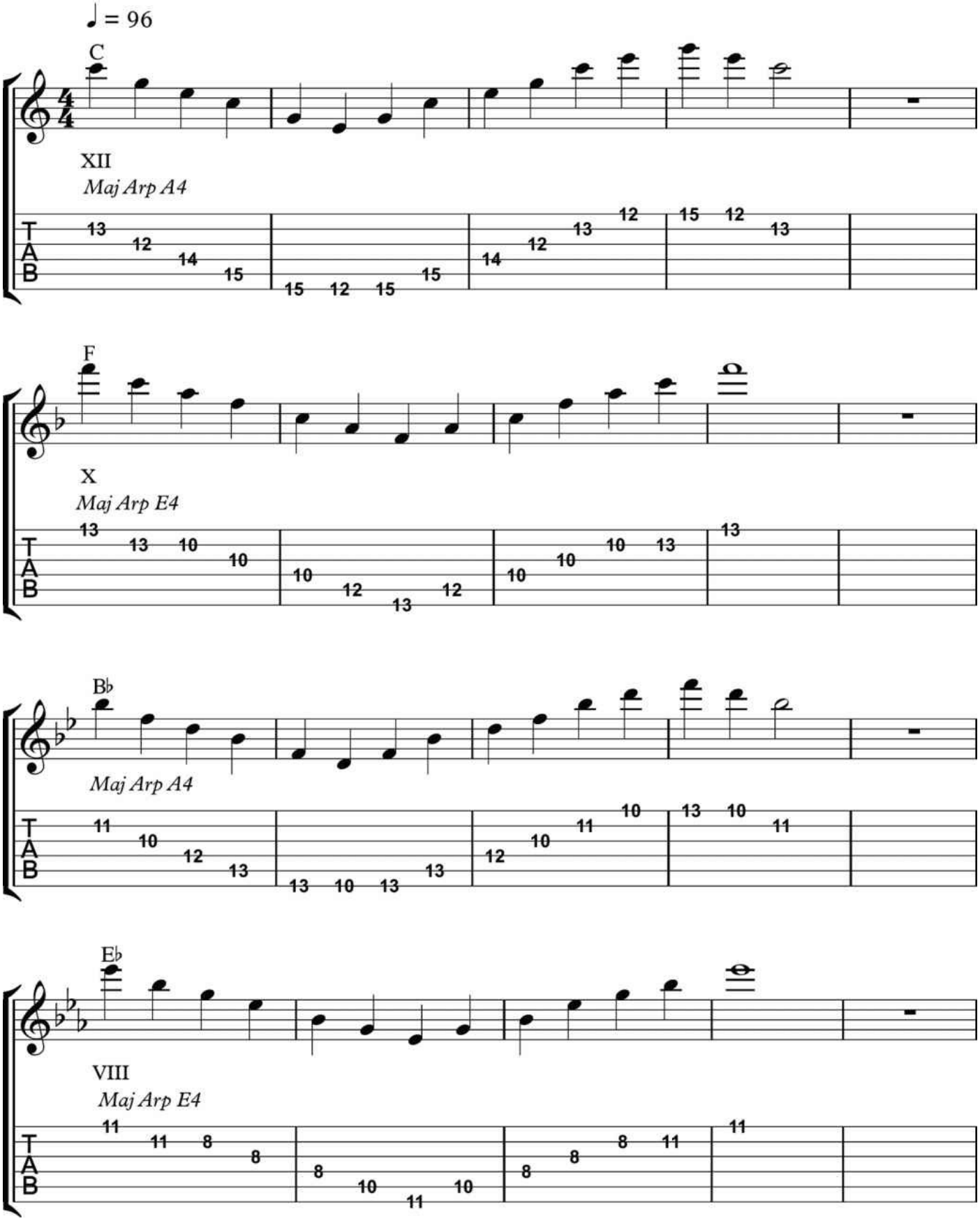


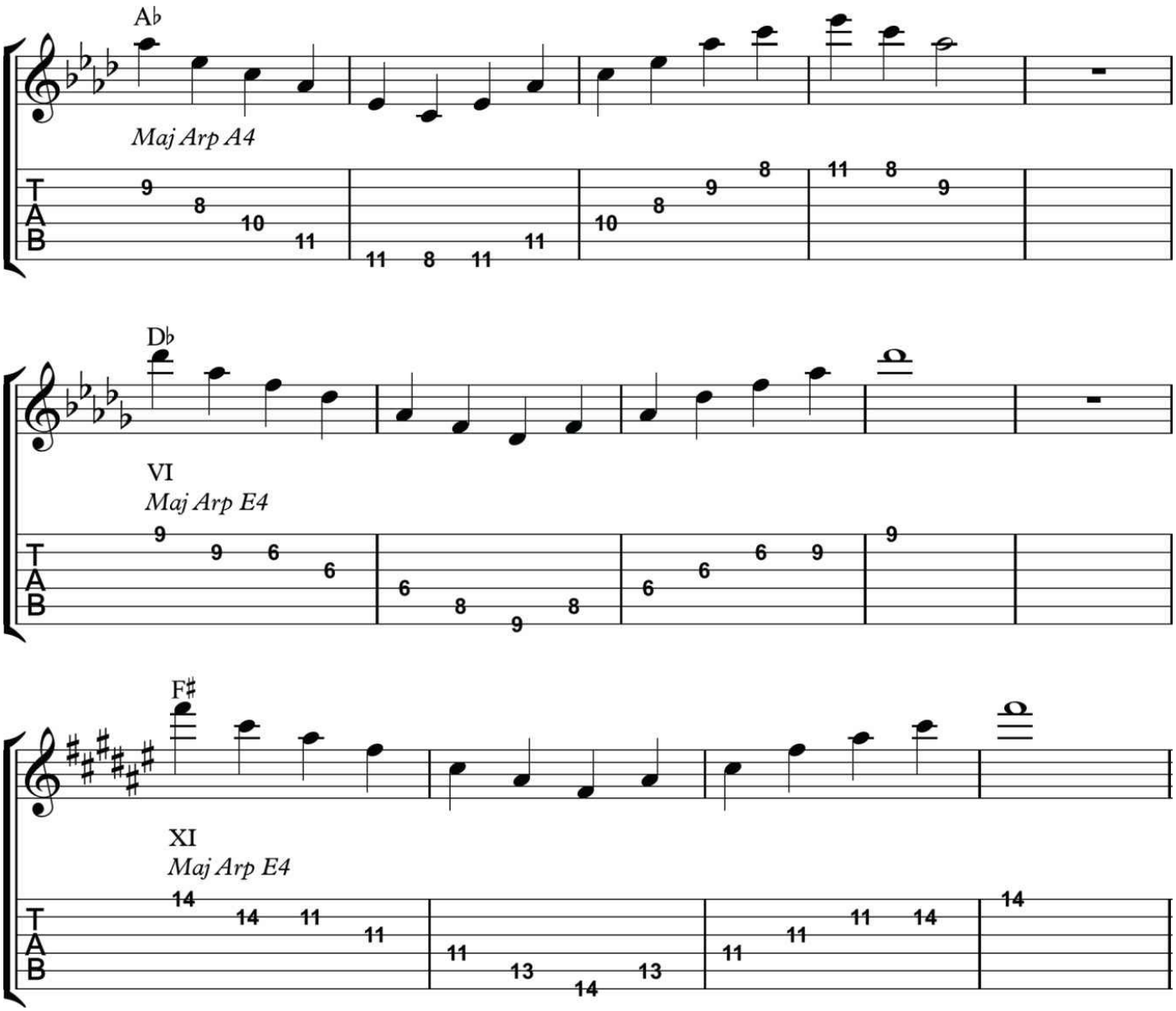
Playing Maj Pent Scales and Arpeggios, Exercise 2 (in E)



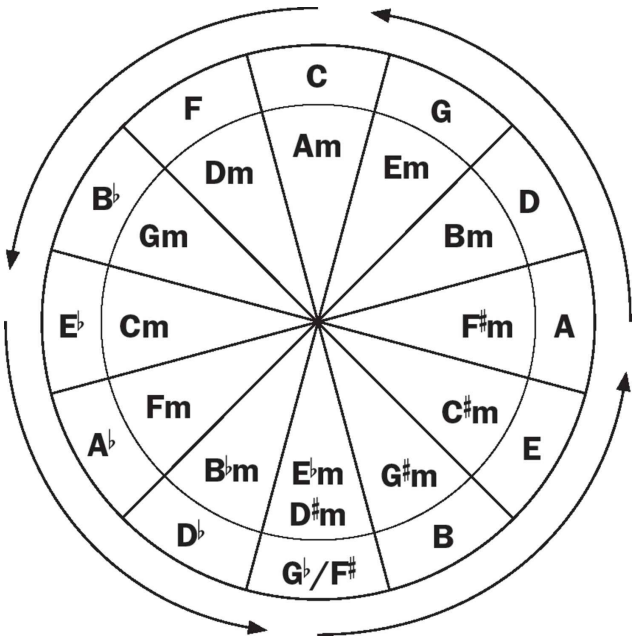
The following exercise uses the higher hand position arpeggios while starting and ending on the highest roots.

Playing Major Arpeggios Around the Circle of Fifths



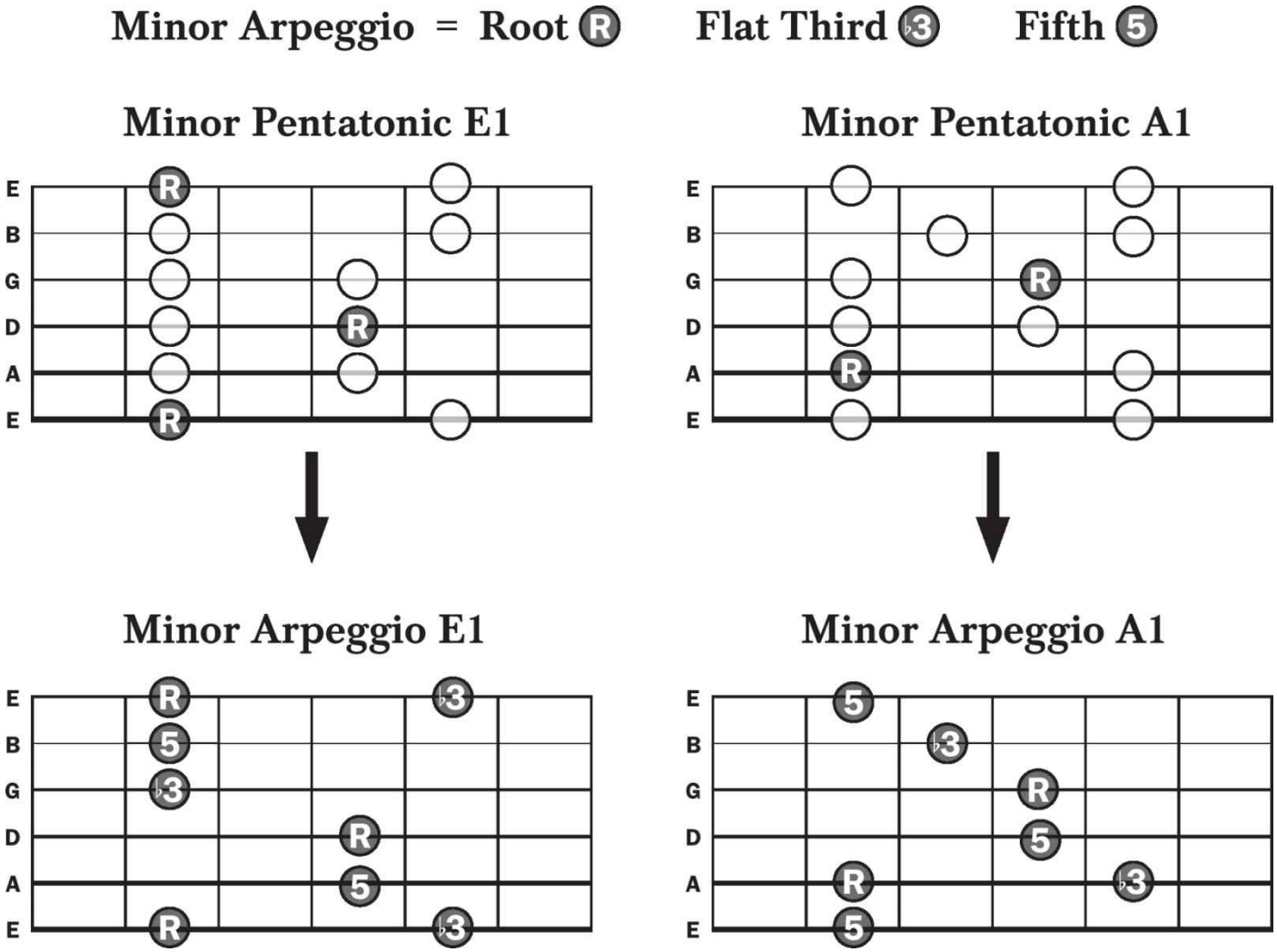


Try to continue this exercise as you play counter-clockwise around the entire circle of fifths, using the diagram below. Remember to constantly use higher hand position arpeggios and start playing each one from the high root.

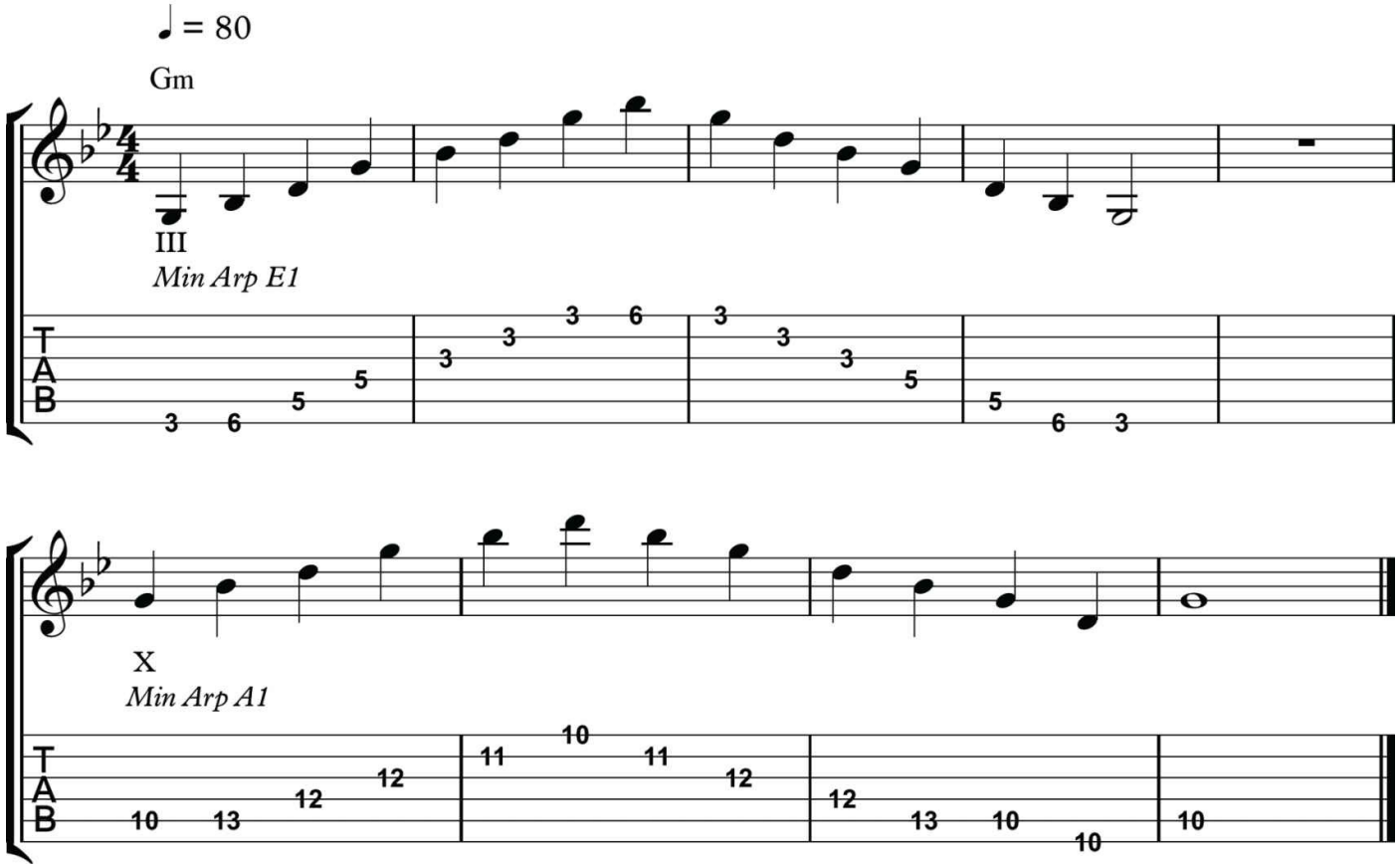


Part 2: Minor Arpeggios

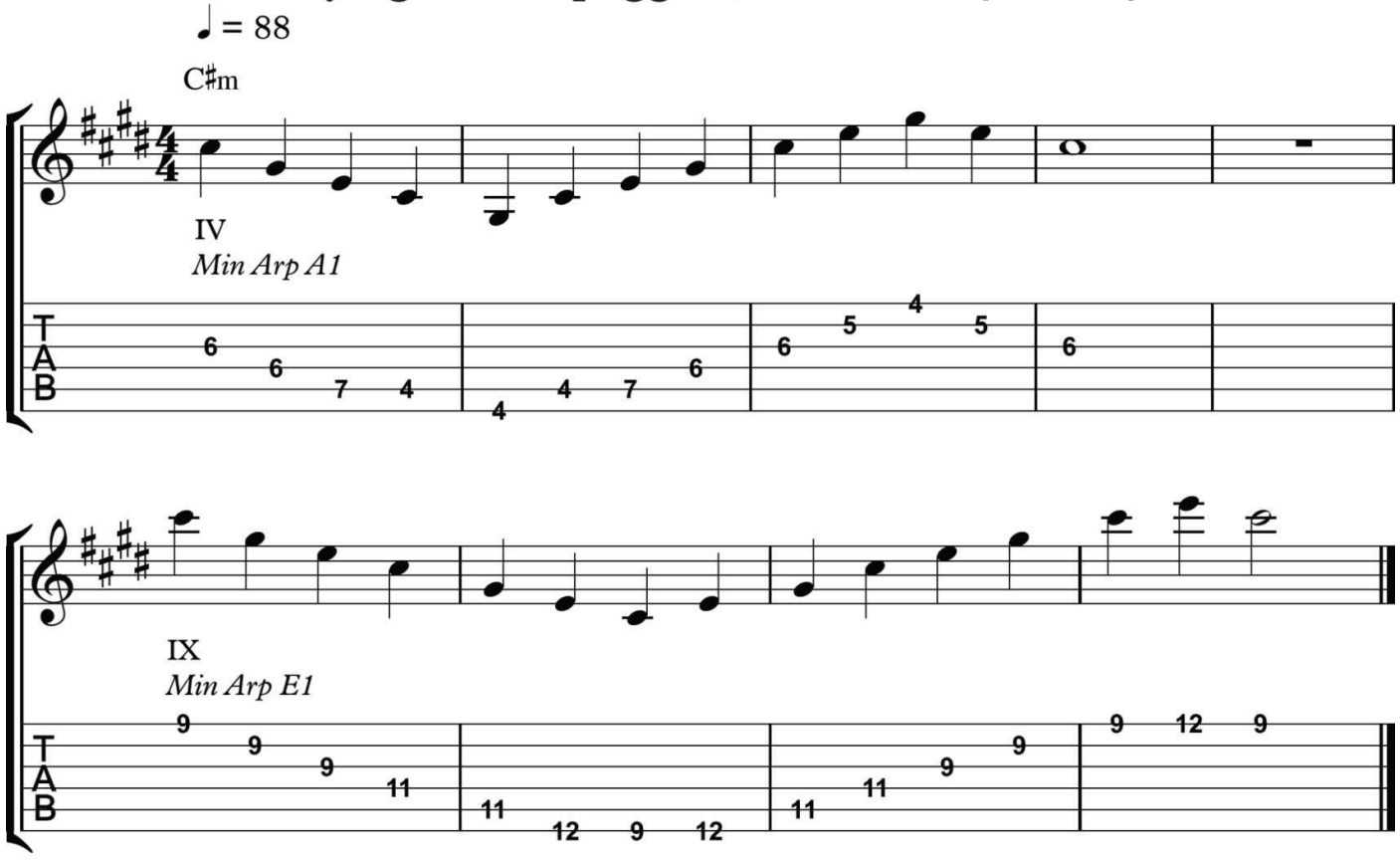
Just as with the major scales and arpeggios, there are minor arpeggios embedded within the minor pentatonic scales. The minor arpeggio is different from the major arpeggio in that it has a Flat Third, which means that the the third that is used in the major arpeggio is made flat to create a minor chord/arpeggio. Both major and minor arpeggios contain a root and a fifth. The diagrams below will show the appropriate minor arpeggios embedded within Min Pent E1 and Min Pent A1.



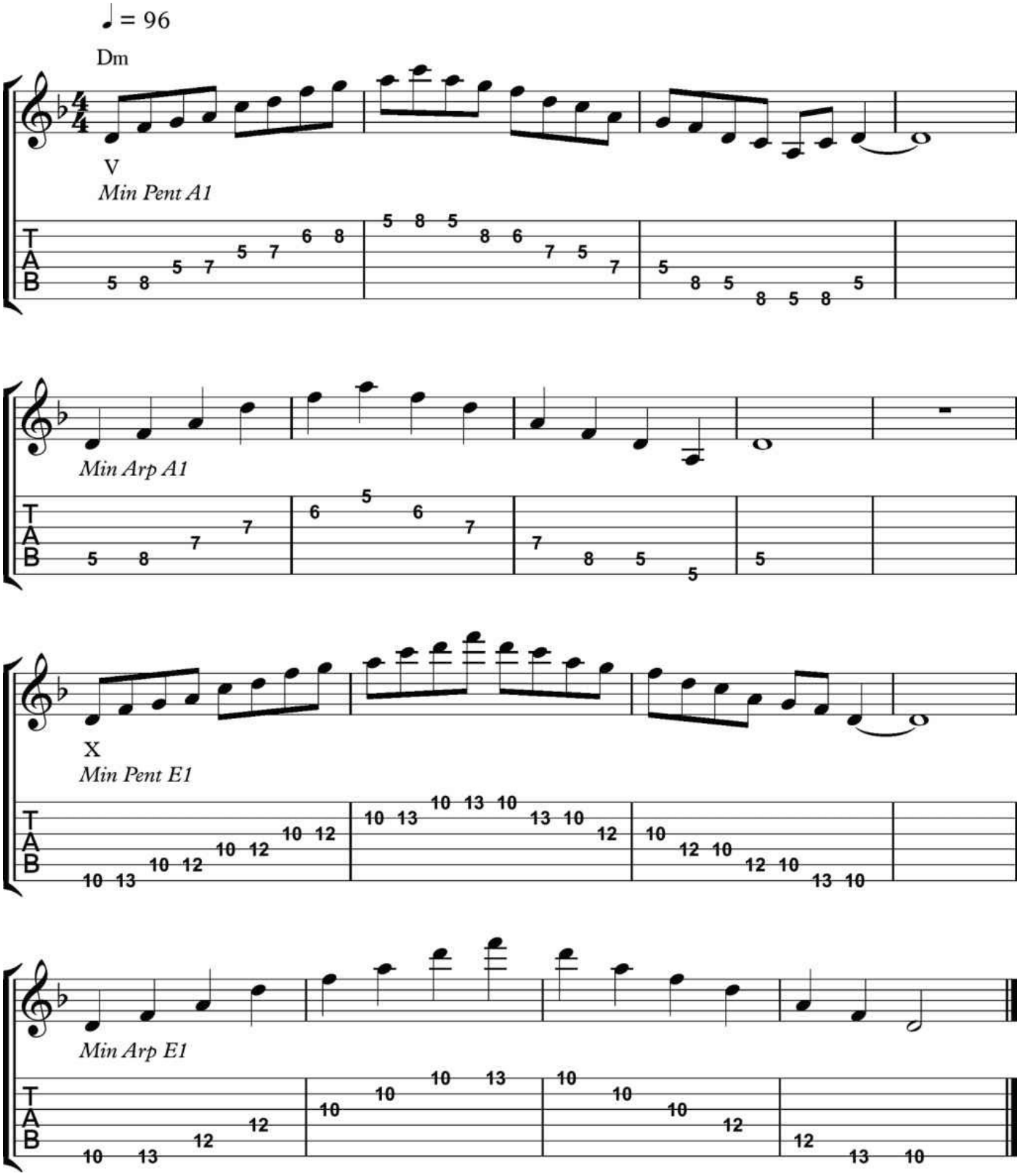
Playing Min Arpeggios, Exercise 1 (in Gm)



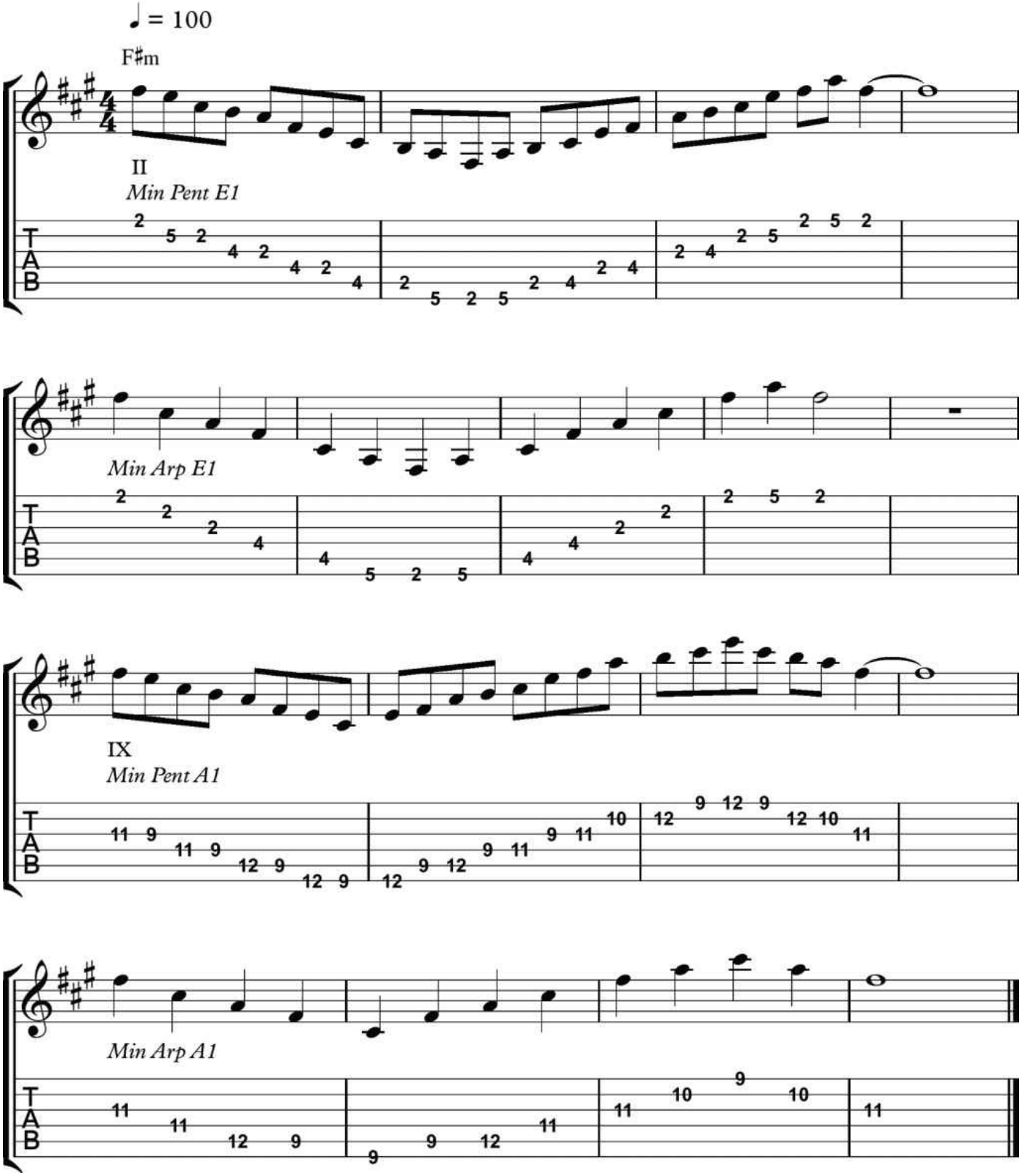
Playing Min Arpeggios, Exercise 2 (in C♯m)



Playing Min Pent Scales and Arpeggios
Exercise 1 (in Dm)

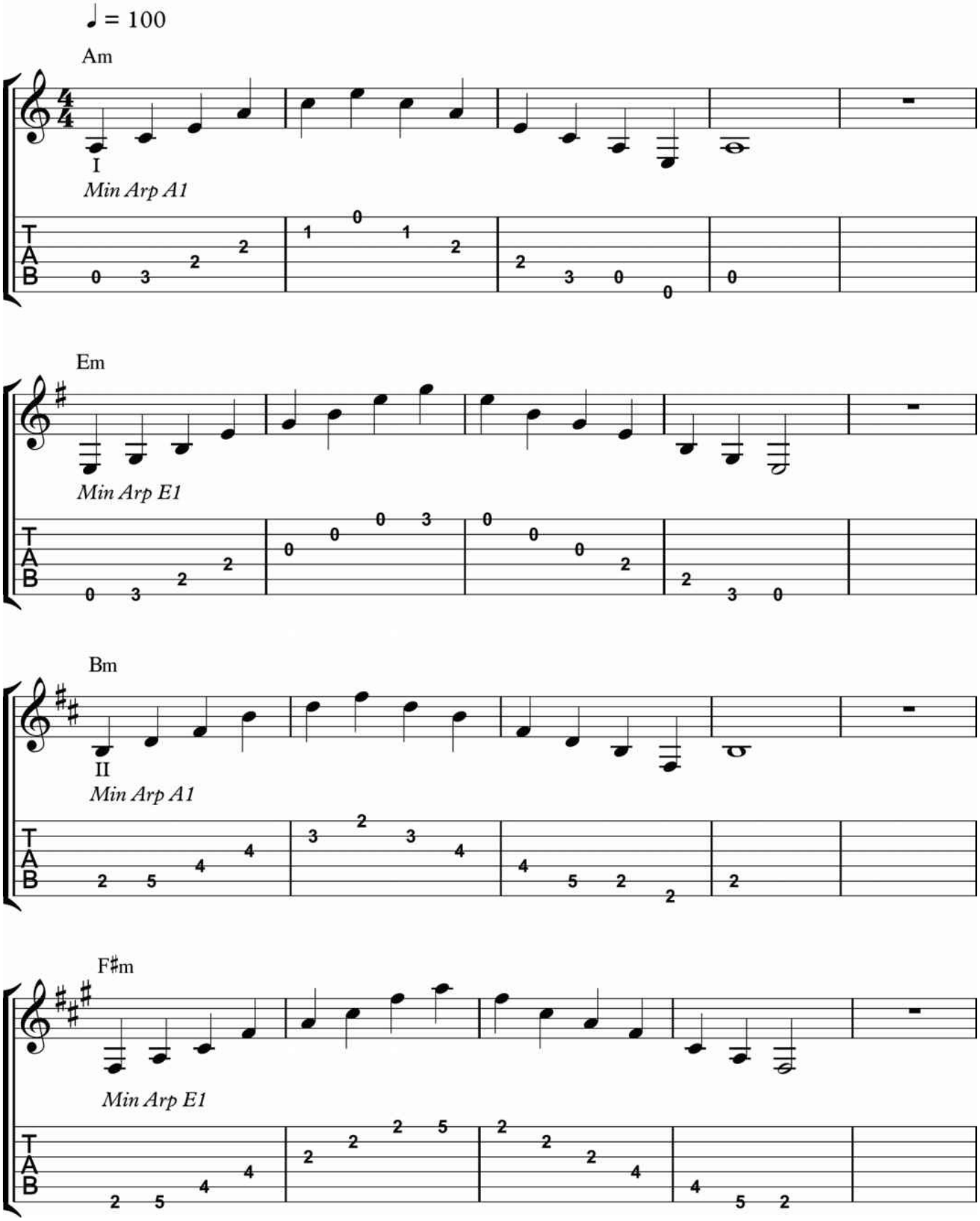


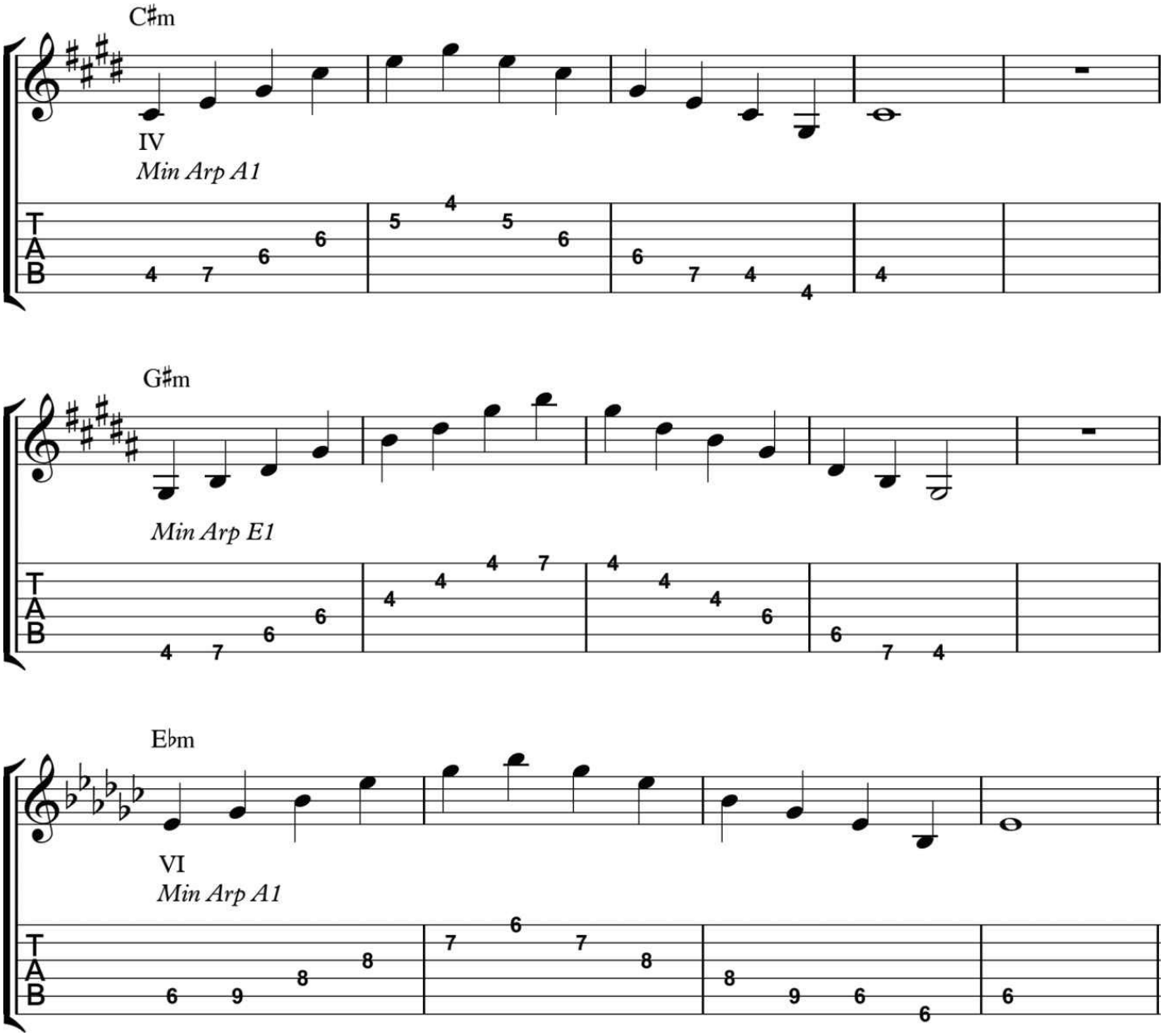
Playing Min Pent Scales and Arpeggios
Exercise 2 (in F♯m)



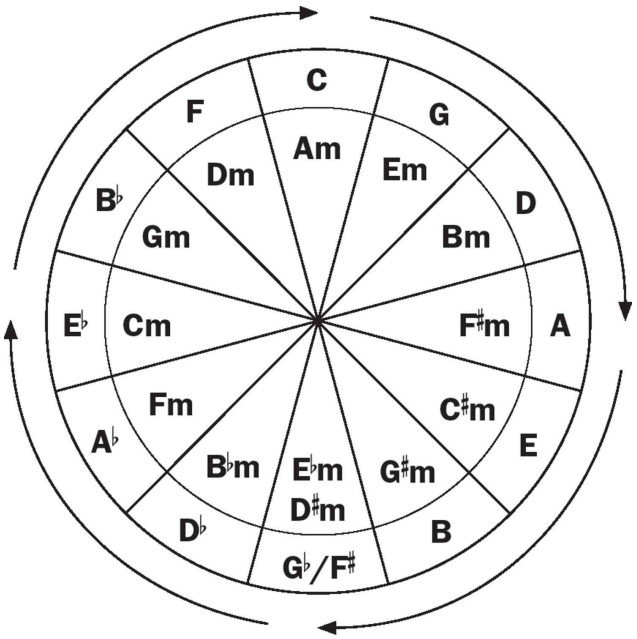
The following exercise uses the lower hand position arpeggios while starting and ending on the lowest roots.

Playing Minor Arpeggios Around the Circle of Fifths





Try to continue this exercise as you play clockwise around the entire circle of fifths, using the diagram below. Remember to constantly use lower hand position arpeggios and start playing each one from the low root.

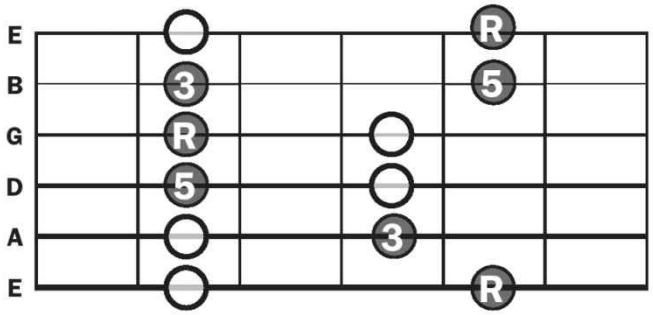


Part 3: Improvising With Arpeggios

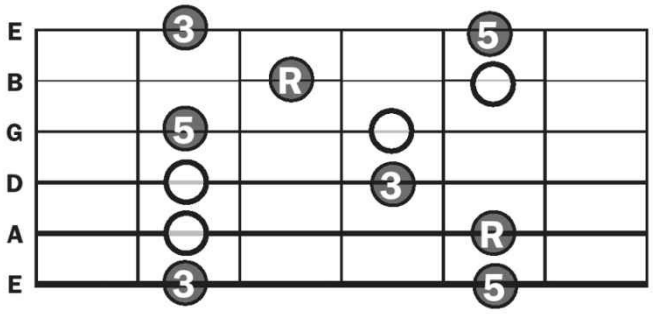
By completing the previous exercises at their notated tempos, you should now be very comfortable with the major arpeggios embedded within Maj Pent E4 and Maj Pent A4, as well as the minor arpeggios embedded within Min Pent E1 and Min Pent A1. Below are the diagrams for all major and minor pentatonic scales covered thus far, along with their arpeggios. These diagrams have the arpeggios notated within the scale shape, rather than as an isolated shape.

Major Pentatonic Scale Shapes

Maj Pent E4

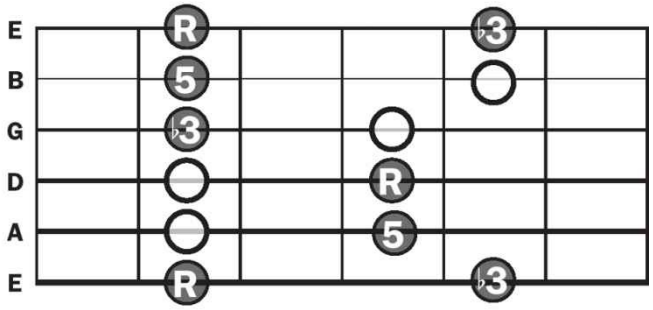


Maj Pent A4

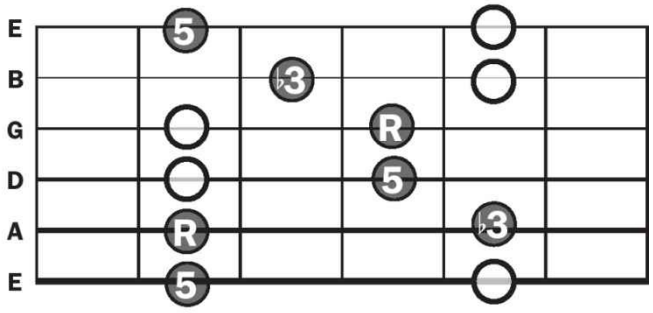


Minor Pentatonic Scale Shapes

Min Pent E1



Min Pent A1



When preparing to include the use of arpeggios into your improvised solos, the usual Three-Step Method must be slightly altered. Step 1 will now prepare the arpeggios while Step 2 will continue to prepare the scales.

Three-Step Method for 2 Pentatonic & Arpeggio Shapes

Step 1: Play the Arpeggios

- Using quarter notes, play the arpeggios of the chords two times through the chord progression. First use the lower hand position of each arpeggio shape, then the higher hand position of each arpeggio shape.
- Alternate starting each arpeggio from low roots or high roots, and leave one beat of rest between each arpeggio.

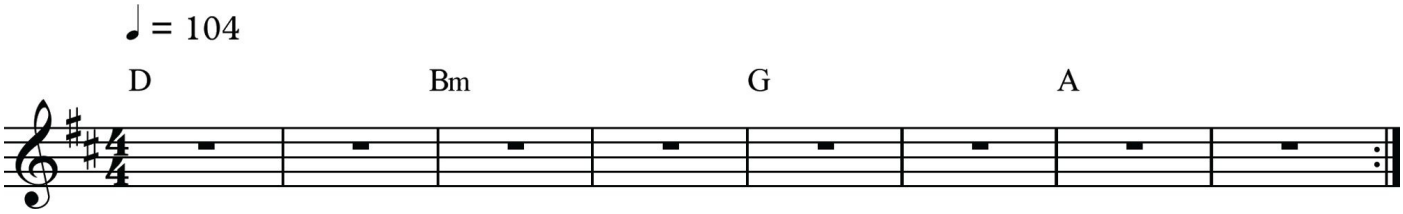
Step 2: Play the Scales

- Using eighth notes, play the pentatonic scales two times through the chord progression. First use the lower hand position of each scale shape, then the higher hand position of each scale shape.
- Each scale should begin on a root and end on a chord tone (note of the arpeggio). To achieve this, the scale with either 1) continue in sequence until the very last note, or 2) the next-to-last note will be repeated as the last note.
- Alternate starting each scale from low roots or high roots, and leave one beat of rest between each scale.

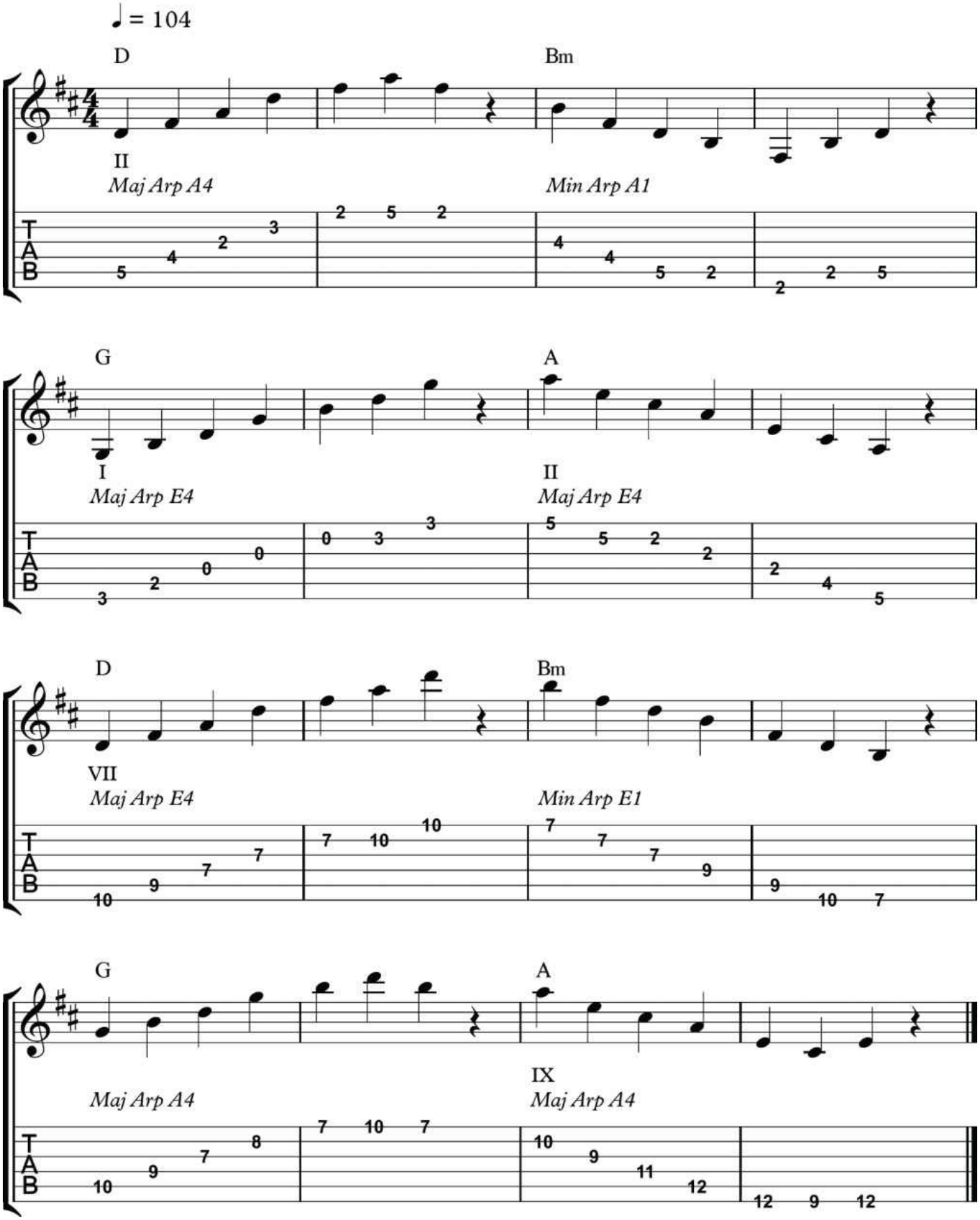
Step 3: Improvise Over the Chord Progression

- Think ahead to keep track of when the chords are about to switch.
- Use the arpeggios within your improvisation to link your solo with the chords.
- Start your solo with lower shapes (and notes) and end your solo with higher shapes (and notes) to help the solo gradually build and become more intense.

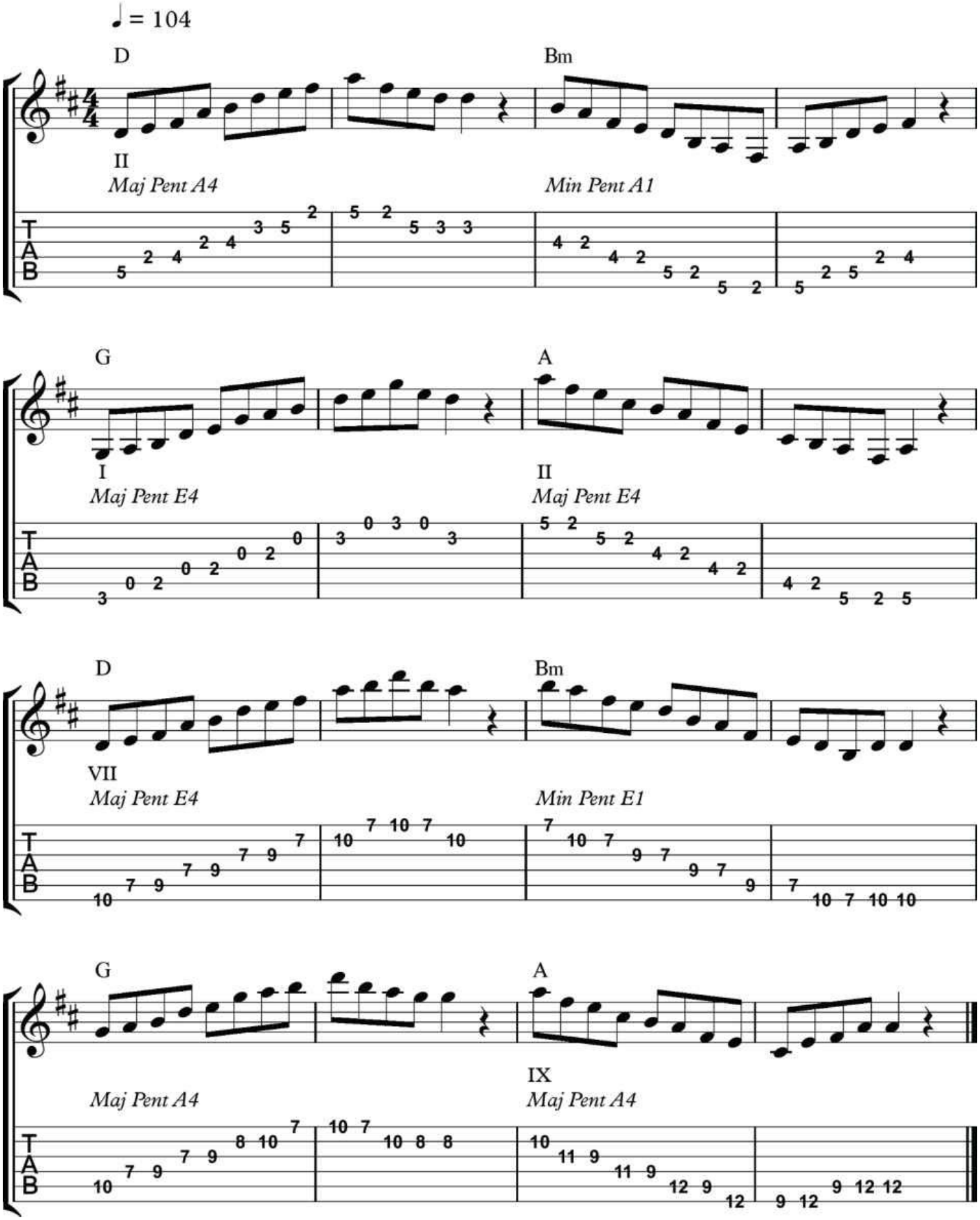
This method will now be applied to the following chord progression:



Step 1: Play the Arpeggios
(lower shapes, then higher shapes)

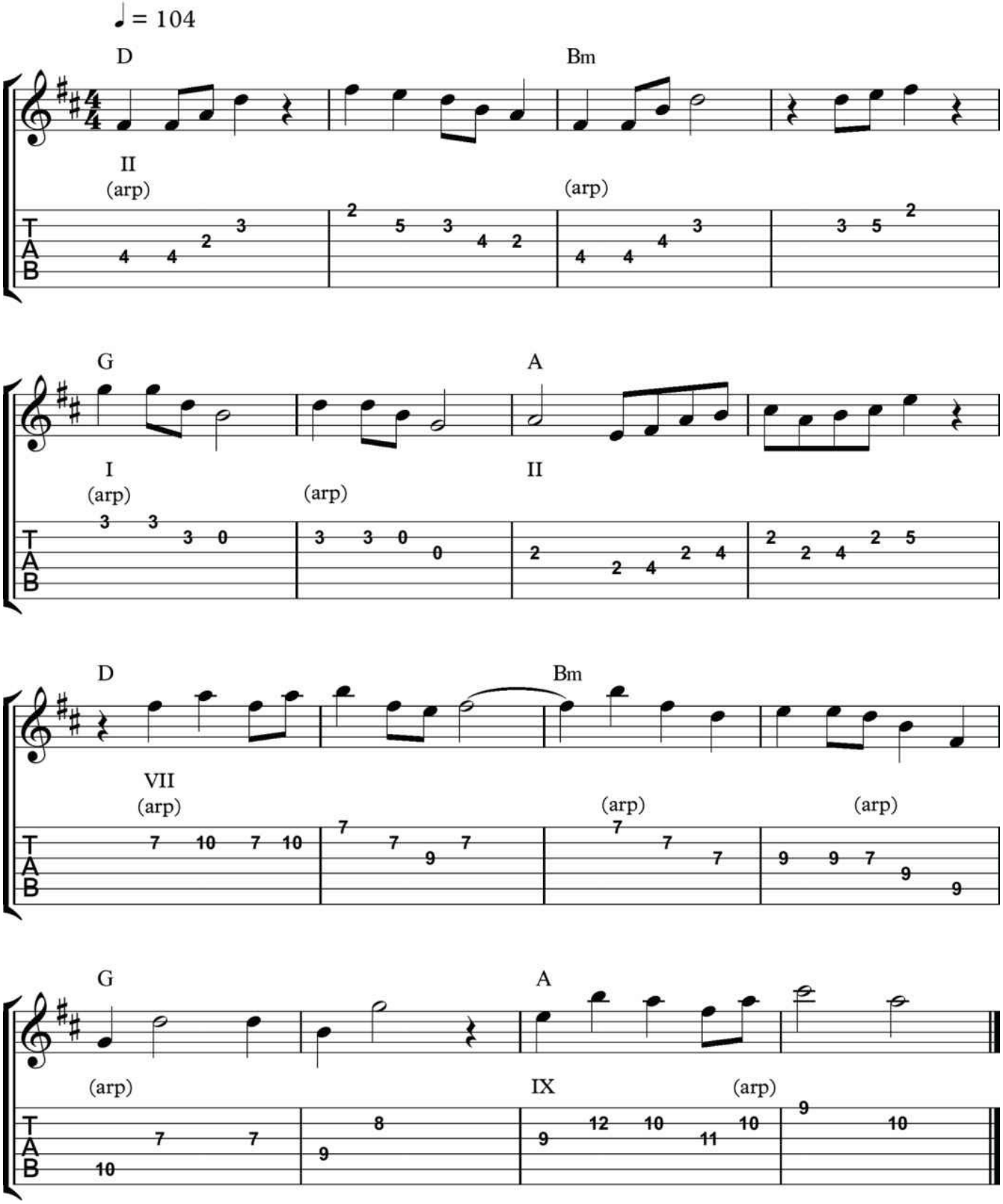


Step 2: Play the Scales (ending on chord tones) (lower shapes, then higher shapes)



To show how these arpeggios can now be incorporated into a solo, all occurrences of at least three consecutive arpeggio notes in Step 3 have been accompanied by “(arp)” above the TAB.

Step 3: Improvise Over the Chord Progression



Now try applying this Three-Step Method to the following chord progressions. Work on each one until you can comfortably improvise over it.

Step 1: Play the Arpeggios (low shapes, high shapes)

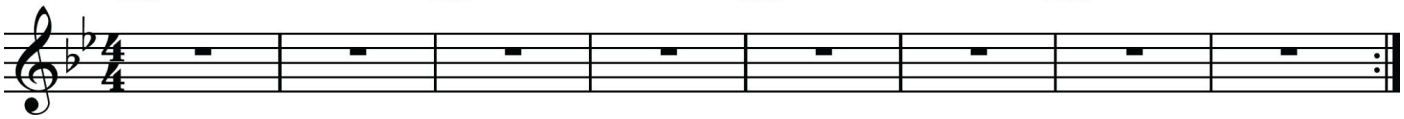
Step 2: Play the Scales (low shapes, high shapes)

Step 3: Improvise Over the Chord Progression

Improvising With Arpeggios, Exercise 1

♩ = 100

Gm Cm Gm Dm



Improvising With Arpeggios, Exercise 2

♩ = 104

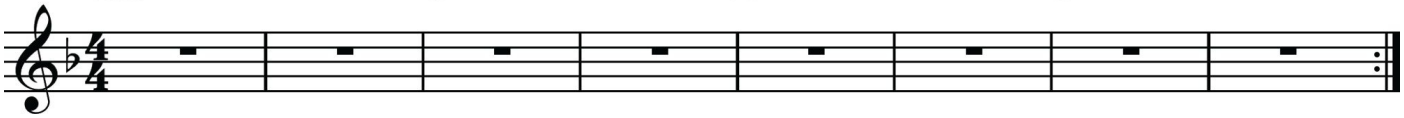
E B C♯m A



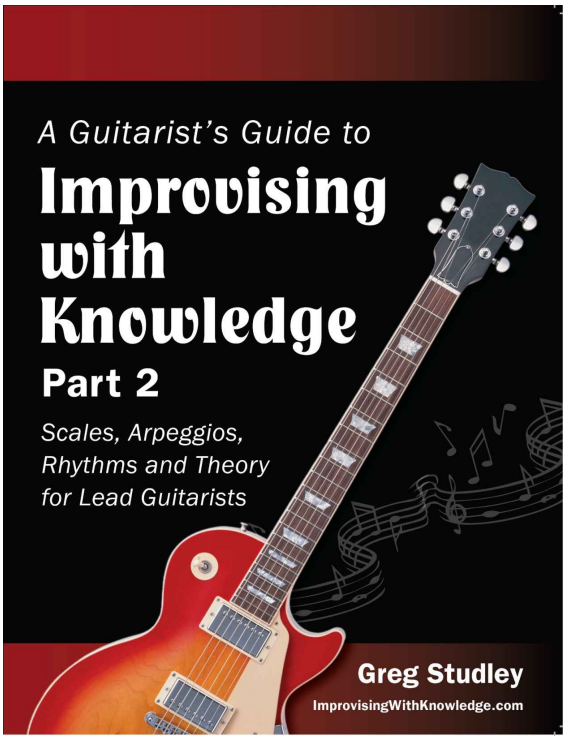
Improvising With Arpeggios, Exercise 3

♩ = 108

Dm C B♭ C



You are now ready for A Guitarist's Guide to Improvising With Knowledge, Part 2



- **Complete your understanding of major and minor pentatonic scales and arpeggios across the neck**
- **Incorporate slides, bends, hammer-ons, and pull-offs**
- **Learn picking techniques for triplets**
- **Constantly increase your speed and agility for improvising**



Greg Studley has spent years advancing his technique as a professional guitarist and music instructor. In over ten years of teaching, he has worked with students of all ages and skill levels, from those learning the basics to professionals looking to finely tune their musical abilities and understanding. Greg earned his degree in Jazz Performance from Loyola University New Orleans and currently teaches guitar, bass and piano in San Francisco, CA. He also spends time working as a musician in the the Bay Area's studio scene and performing regularly around the western US. In 2013, Greg released the *Speed, Accuracy & Technique for Guitar* book series and established the popular website ImprovisingWithKnowledge.com, based upon the improvisation methods of this book. He most recently introduced a new book series, *Essentials of Rhythm Guitar*, to help guitarists understand the link between music theory and chord playing.