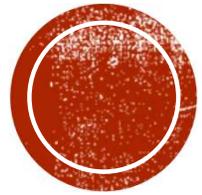


BASIC CHORD THEORY FOR STRUMMERS

Sponsored by The Internet Chord Database

April 7, 2020





PLAYING MUSIC IS MORE THAN JUST MEMORIZING A BUNCH OF CHORDS ON YOUR INSTRUMENT.

That's difficult. And takes a long time.

AGENDA

- What is a chord?
- Why do we play them?
- How are they constructed?
- How can I play any chord on my instrument without looking it up?





WHAT IS A CHORD?



WHAT IS A CHORD?

- A chord is 3 or more notes played at the same time (or in rapid succession as in strumming a uke or guitar).
- The wavelengths of the pitches meld together (harmonize) to create the unique sound of the chord
- A chord is named for its root pitch and quality
 - Example: C Major



CHORD QUALITY

- Major Chords
 - Very common in western music
 - Happy, simple, cheerful, confident, bright, satisfying
- Minor Chords
 - Also very common in western music
 - Sad, serious, dark, sullen, apprehensive, melancholy, depressed, mysterious
- Augmented Chords
 - Less common in pop or folk music
 - Anxious, suspenseful
- Diminished Chords
 - Less common in pop or folk music
 - Tense, unpleasant, fearful, shock, spooky, suspenseful



PRACTICAL CHORD TYPES

- 90% of music we play consists of these 3 types of chords:
 - Major Chords - Happy, simple, cheerful, confident, bright, satisfying
 - Minor Chords - Sad, serious, dark, sullen, apprehensive, melancholy, depressed, mysterious
 - Seventh (7th) Chords (could be major, minor, etc...) - Jazzy, bluesy, romantic, serene, tranquil, exhilarant, strong, relentless, funky, soulful, moderate edginess
- All other chords can be generally classified as derivatives of these 3 types



CHORD TYPES

- **Major**
- **Minor**
- Diminished
- Diminished 7th
- Augmented
- Major 6th
- Minor 6th
- Major 7th
- **Dominant 7th**
- Minor 7th
- Dominant 9th
- Major 9th
- Dominant Minor 9th
- Minor 9th
- Suspended 4th
- Fifth (Power Chord)
- Added 9th
- Minor, Added 9th
- Suspended 2nd
- Minor, Major 7th
- Minor 7th, Flat 5th
- Dominant 7th, Flat 5th
- Augmented 7th
- Dominant 11th
- Minor 11th
- Dominant 13th
- Dominant 7th, Sharp 9th
- 7th, Suspended 4th
- Major 6th, Added 9th
- Minor 6th, Added 9th
- Minor 9th, Major 7th
- Flat 5th
- Major 7th, Flat 5th
- Augmented 7th, Flat 9th
- 9th Augmented
- 9th, Flat 5th
- 9th, Augmented 11th
- 13th, Flat 9th
- 13th, Flat 9th, Flat 5th
- Major 7th, Sharp 5th
- Major 13th

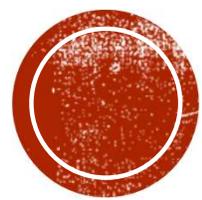
<https://www.InternetChordDatabase.com/Reference.aspx>



WHY DO WE PLAY CHORDS?

- Chords support the melody
 - This is why you strum chords while singing the melody
- Add additional musical interest beyond the melody
- Chords provide harmony notes that provide timbre (aka the color or “sound”)
- Chords played as rhythm backup help keep the beat
- Can also provide musical tension
- Show how amazing of a musician you are
 - Switching quickly between them
 - Knowing obscure chord shapes
 - Figuring out a chord on your instrument when you don’t know it





INTERVALS AND SCALES



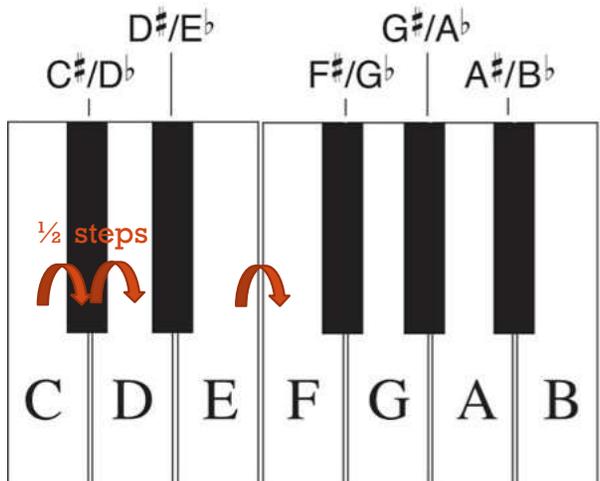
INTERVALS

- An *Interval* is simply the distance between two notes
- It is measured in half steps
- For a given note (the root note), intervals have specific names given their distances from the root note
- There are many types of intervals, but the table displays the basic ones

Interval Name	Half Steps	Example from C
Perfect Unison	0	C
Minor 2 nd	1	C# / D ^b
Major 2 nd	2	D
Minor 3 rd	3	D# / E ^b
Major 3 rd	4	E
Perfect 4 th	5	F
Perfect 5 th	7	G
Minor 6 th	8	G# / A ^b
Major 6 th	9	A
Minor 7 th	10	A# / B ^b
Major 7 th	11	B
Octave	12	C

INTERVALS

- On a piano, it is a half step from one key to the next
- On a fretted instrument, it is a half step from one fret to the next
- So simply counting frets (or keys) you can determine the interval



Ukulele - Standard / C Tuning

Nut	G ⁴	C ⁴	E ⁴	A ⁴
Fret 1	A ^b /G [#]	C [#] /D ^b	F	A [#] /B ^b
Fret 2	A	D	F [#] /G ^b	B
Fret 3	A [#] /B ^b	D [#] /E ^b	G	C
Fret 4	B	E	A ^b /G [#]	C [#] /D ^b
Fret 5	C	F	A	D
Fret 6	C [#] /D ^b	F [#] /G ^b	A [#] /B ^b	D [#] /E ^b
Fret 7	D	G	B	E

Red arrows on the right side of the table indicate a half step interval between adjacent frets, labeled $\frac{1}{2}$ steps.

WHAT IS A SCALE?

- A scale is a set of notes ordered by pitch (or frequency)
 - Do Re Mi Fa So La Si Do (fixed Do – Do is always the note C)
 - Do Re Mi Fa So La Ti Do (movable Do – Do is the root of the scale, regardless of which note that may be)
- It is defined by a sequence of interval types
- A scale tells you two things
 1. Which notes to use (technically, the sequence of intervals)
 2. Which note to start on

DISSECTING A MAJOR SCALE

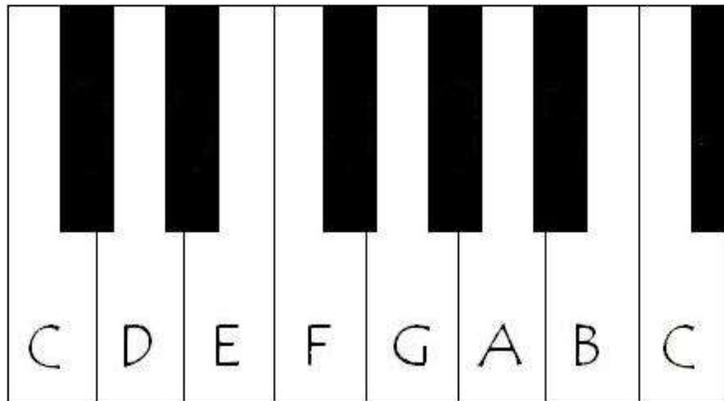
C Major Scale	C	D	E	F	G	A	B	C
G Major Scale	G	A	B	C	D	E	F#	G
Interval Number	1	2	3	4	5	6	7	8 / 1
Interval Name	Unison	Major 2 nd	Major 3 rd	Perfect 4 th	Perfect 5 th	Major 6 th	Major 7 th	Octave / Unison
Roman Numeral	I	II / ii	III / iii	IV	V	VI / vi	VII / vii	VIII / I
Scale Degree	Tonic	Super-tonic	Mediant	Sub-dominant	Dominant	Sub-mediant	Leading Tone	Tonic

Many, MANY modern songs follow the “1,4,5” chord progression



C MAJOR SCALE

C **D** **E** **F** **G** **A** **B** **C**
 1 2 3 4 5 6 7 8/1



All of the white keys on a piano

Ukulele - Standard / C Tuning

	Nut	G4	C4	E4	A4
Fret 1	Ab/G#	C#/Db	F	A#/Bb	
Fret 2	A	D	F#/Gb	B	
Fret 3	A#/Bb	D#/Eb	G	C	
Fret 4	B	E	Ab/G#	C#/Db	
Fret 5	C	F	A	D	
Fret 6	C#/Db	F#/Gb	A#/Bb	D#/Eb	
Fret 7	D	G	B	E	
Fret 8	D#/Eb	Ab/G#	C	F	
Fret 9	E	A	C#/Db	F#/Gb	
Fret 10	F	A#/Bb	D	G	

G MAJOR SCALE

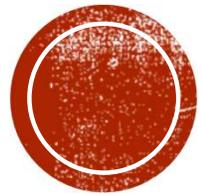
G **A** **B** **C** **D** **E** **F#** **G**
 1 2 3 4 5 6 7 8/1



Ukulele - Standard / C Tuning

Nut	G4	C4	E4	A4
Fret 1	Ab/G#	C#/Db	F	A#/Bb
Fret 2	A	D	F#/Gb	B
Fret 3	A#/Bb	D#/Eb	G	C
Fret 4	B	E	Ab/G#	C#/Db
Fret 5	C	F	A	D
Fret 6	C#/Db	F#/Gb	A#/Bb	D#/Eb
Fret 7	D	G	B	E
Fret 8	D#/Eb	Ab/G#	C	F
Fret 9	E	A	C#/Db	F#/Gb
Fret 10	F	A#/Bb	D	G





CHORD CONSTRUCTION



WHICH NOTES MAKE UP A CHORD?

- There is a *lot* of music theory that determines the notes that define a chord
- All chords have a “root” note (or pitch)
 - This note is used in the chord’s name: C Major [C], D Minor [Dm], A# Dominant 7th [A#7]
 - With respect to a song, this note usually (but not always) relates to the song’s melody
- The other notes are chosen by their “distance” (or interval) from the root note
 - Different chord types have different intervals
 - Learning the intervals mean you can figure out the notes in any chord
- Learning the intervals of these chords types will cover the majority of music you are likely to play:
 - Major Chords
 - Minor Chords
 - 7th Chords



MAJOR CHORDS

- Happy, simple, cheerful, confident, bright, satisfying
- There are exactly 3 notes in a Major Chord:
 - Count to 5 starting at the note in the chord's name
 - Notes 1, 3 and 5 are the notes in that chord
- According to the music theory, those notes are:
 1. The root note
 2. A Major 3rd above it – 4 frets (i.e. half steps) away from the root note
 3. And the Perfect 5th – 7 frets (i.e. half steps) away from the root note

Examples:

C Major [C]

Notes

1 – C

2 – D

3 – E

4 – F

5 – G

G Major [G]

Notes

1 – G

2 – A

3 – B

4 – C

5 – D

F Major [F]

Notes

1 – F

2 – G

3 – A

4 – B_b

5 – C

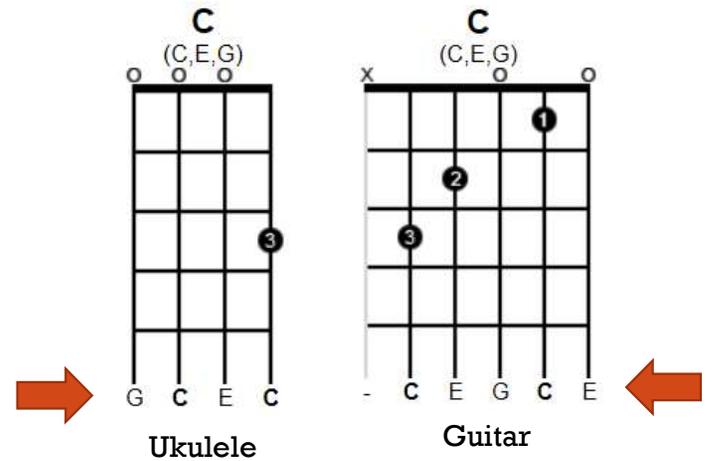
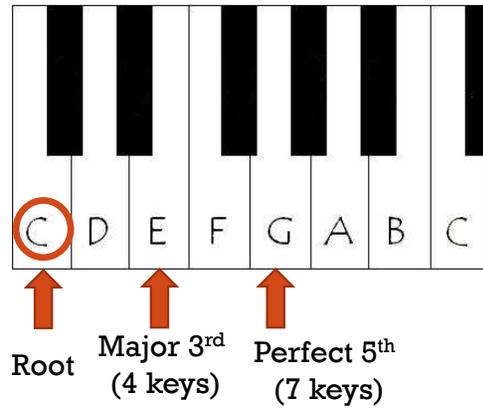


MAJOR CHORDS

C Major [C]

Notes

C
E
G

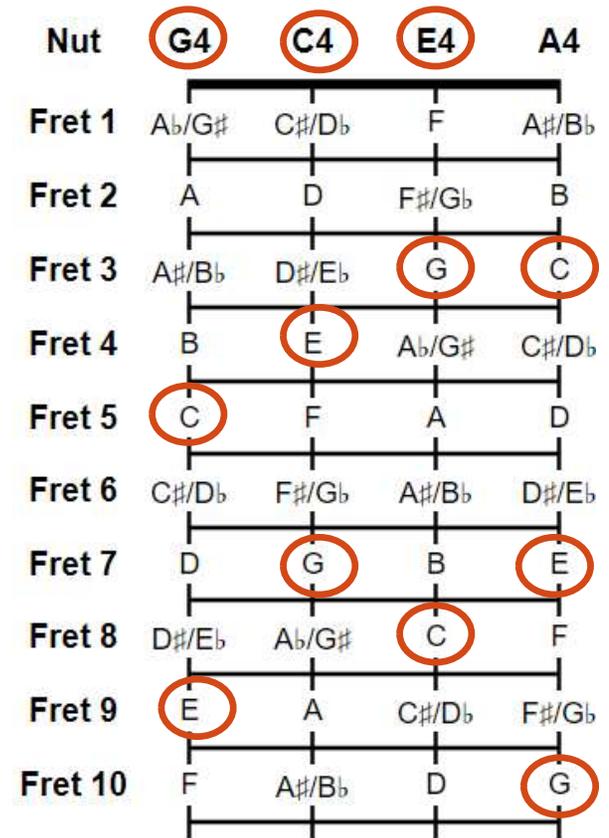
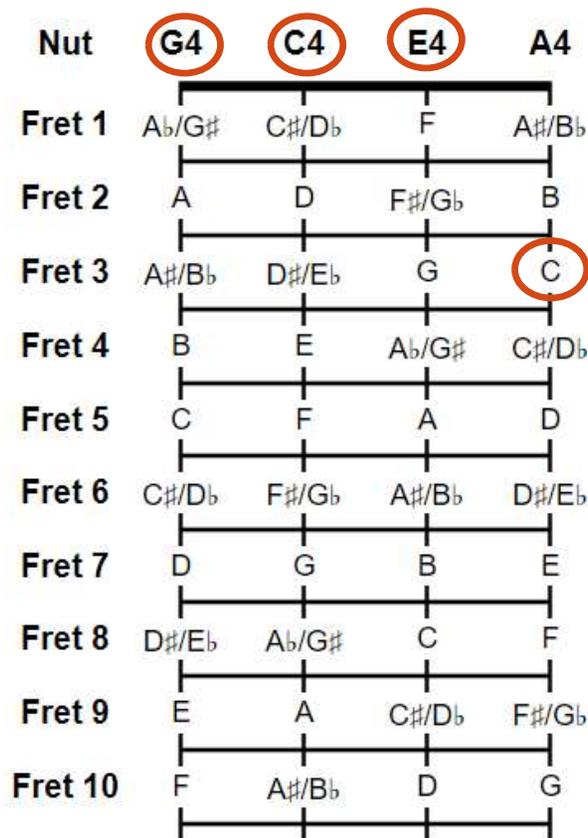


FINDING MAJOR CHORDS ON YOUR UKE

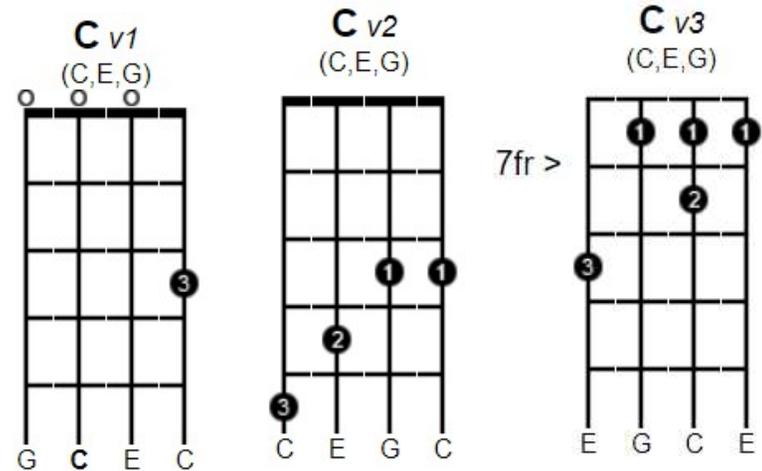
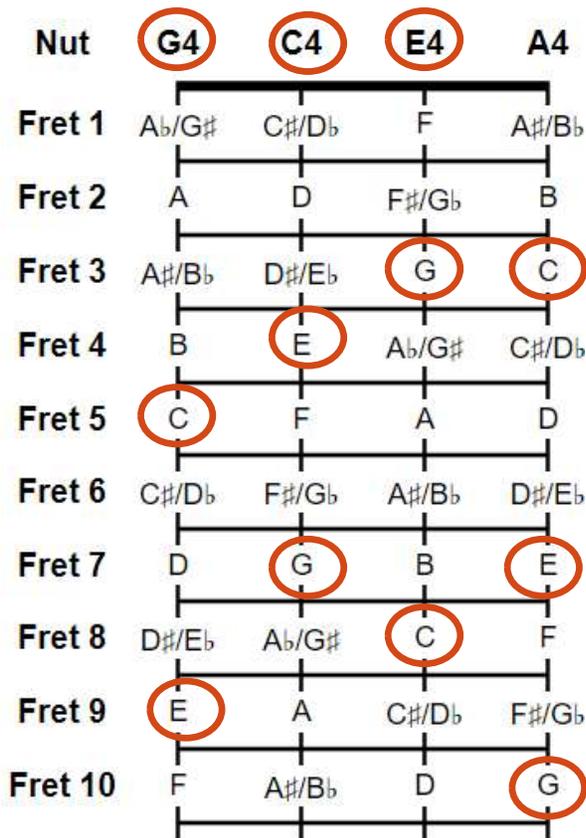
C Major [C]

Notes

C
E
G



FINDING MAJOR CHORDS ON YOUR UKE



INVERSIONS

- A chord is called a *triad* when
 - There are exactly 3 pitches
 - And they are stacked by the interval from the root
 - This is also from low to high in both pitch frequency
- However, the pitches can be inverted in any permutation, making the chord an *inversion*



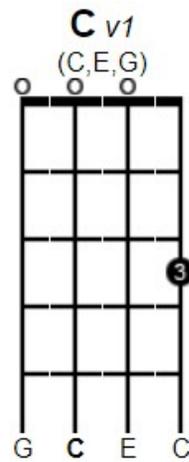
INVERSION EXAMPLES

Ukulele - Standard / C Tuning

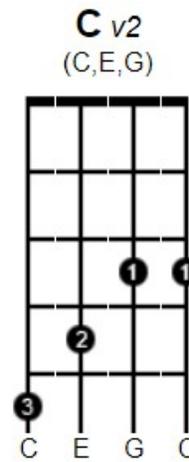
C Major [C]

Notes

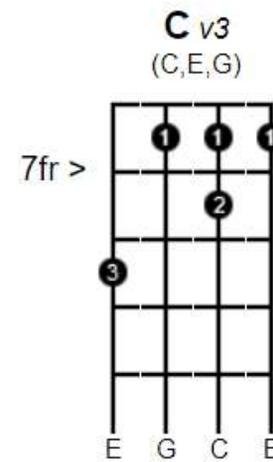
C
E
G



Triad



Inversion



Inversion



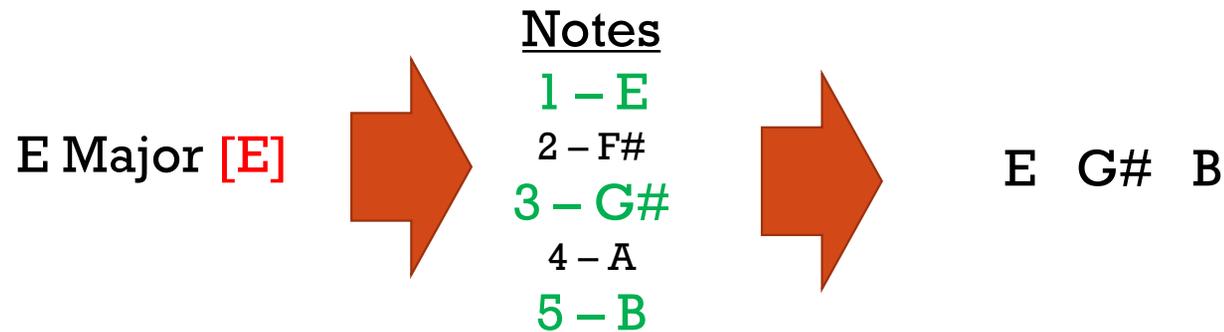
EXERCISE – E MAJOR

- What are the notes in a E Major [E] chord?



EXERCISE – E MAJOR

- What are the notes in a E Major [E] chord?



EXERCISE — E MAJOR

Find the notes
E G# B

Nut	G4	C4	E4	A4
Fret 1	A \flat /G \sharp	C \sharp /D \flat	F	A \sharp /B \flat
Fret 2	A	D	F \sharp /G \flat	B
Fret 3	A \sharp /B \flat	D \sharp /E \flat	G	C
Fret 4	B	E	A \flat /G \sharp	C \sharp /D \flat
Fret 5	C	F	A	D
Fret 6	C \sharp /D \flat	F \sharp /G \flat	A \sharp /B \flat	D \sharp /E \flat
Fret 7	D	G	B	E
Fret 8	D \sharp /E \flat	A \flat /G \sharp	C	F
Fret 9	E	A	C \sharp /D \flat	F \sharp /G \flat
Fret 10	F	A \sharp /B \flat	D	G



EXERCISE — E MAJOR

Find the notes
E G# B

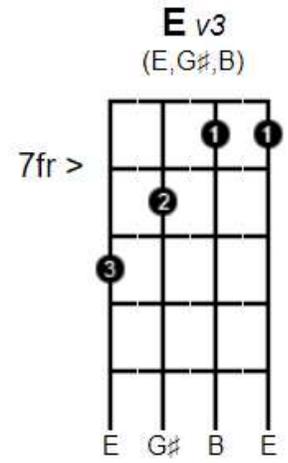
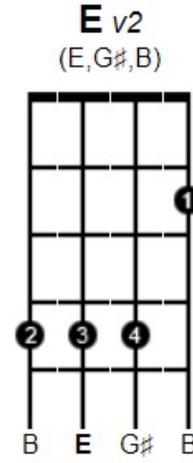
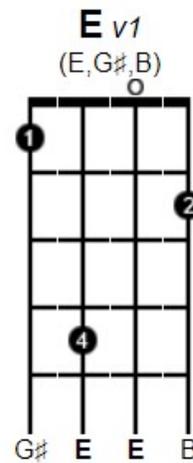
Nut	G4	C4	E4	A4
Fret 1	A \flat /G \sharp	C \sharp /D \flat	F	A \sharp /B \flat
Fret 2	A	D	F \sharp /G \flat	B
Fret 3	A \sharp /B \flat	D \sharp /E \flat	G	C
Fret 4	B	E	A \flat /G \sharp	C \sharp /D \flat
Fret 5	C	F	A	D
Fret 6	C \sharp /D \flat	F \sharp /G \flat	A \sharp /B \flat	D \sharp /E \flat
Fret 7	D	G	B	E
Fret 8	D \sharp /E \flat	A \flat /G \sharp	C	F
Fret 9	E	A	C \sharp /D \flat	F \sharp /G \flat
Fret 10	F	A \sharp /B \flat	D	G



EXERCISE – E MAJOR

Find some shapes

Nut	G4	C4	E4	A4
Fret 1	A \flat /G \sharp	C \sharp /D \flat	F	A \sharp /B \flat
Fret 2	A	D	F \sharp /G \flat	B
Fret 3	A \sharp /B \flat	D \sharp /E \flat	G	C
Fret 4	B	E	A \flat /G \sharp	C \sharp /D \flat
Fret 5	C	F	A	D
Fret 6	C \sharp /D \flat	F \sharp /G \flat	A \sharp /B \flat	D \sharp /E \flat
Fret 7	D	G	B	E
Fret 8	D \sharp /E \flat	A \flat /G \sharp	C	F
Fret 9	E	A	C \sharp /D \flat	F \sharp /G \flat
Fret 10	F	A \sharp /B \flat	D	G



MINOR CHORDS

- Sad, serious, dark, sullen, apprehensive, melancholy, depressed, mysterious
- Notes in a Minor Chord
 1. The root note
 2. A Minor 3rd above it – 3 frets (i.e. half steps) away from the root note
 3. And the Perfect 5th – 7 frets (i.e. half steps) away from the root note

Examples:

C Minor [**Cm**]

Notes

- 1 – C
- 2 – D
- 3 – E^b
- 4 – F
- 5 – G

E Minor [**Em**]

Notes

- 1 – E
- 2 – F[#]
- 3 – G
- 4 – A
- 5 – B



MINOR CHORDS

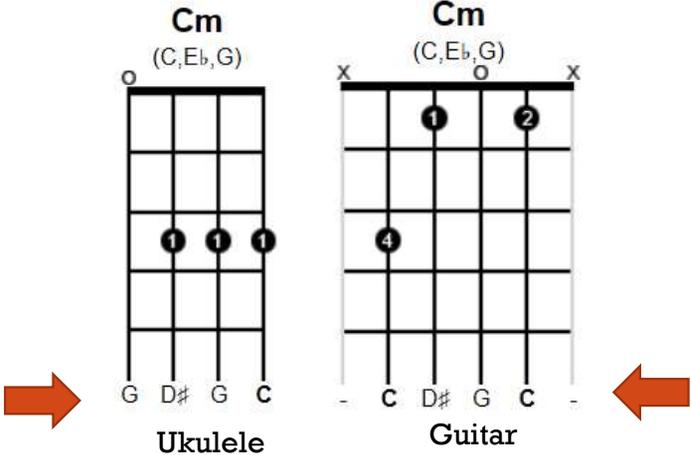
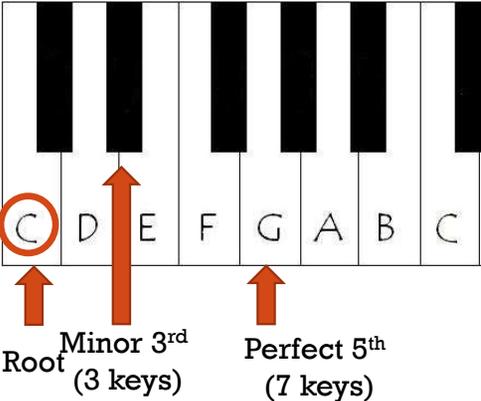
C Minor [Cm]

Notes

C

E_b

G

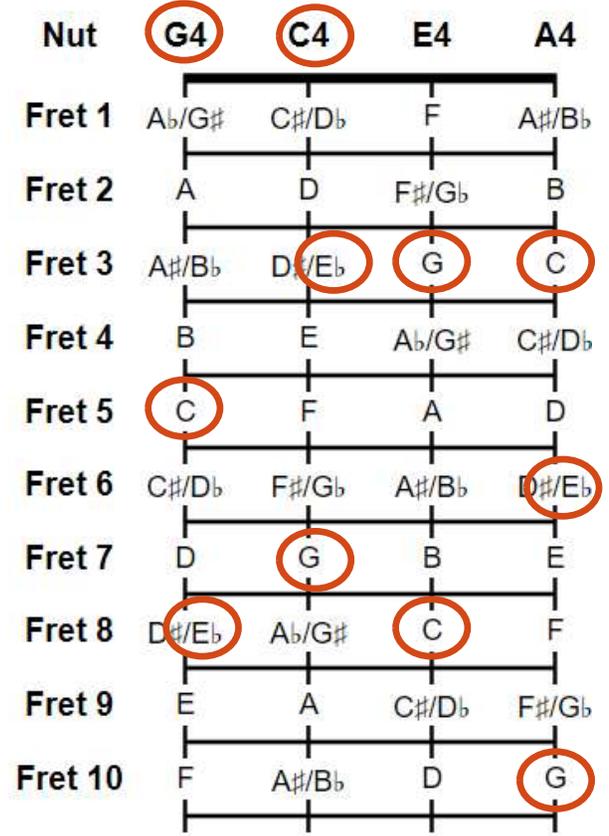
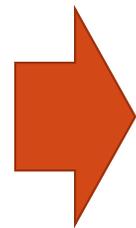
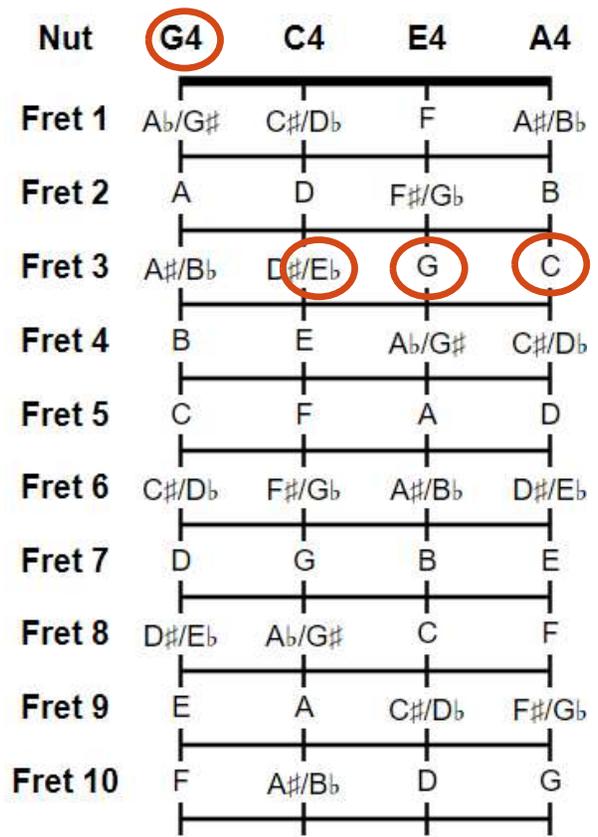


FINDING MINOR CHORDS ON YOUR UKE

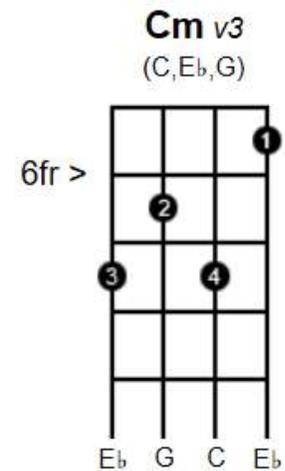
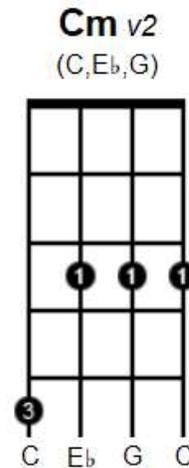
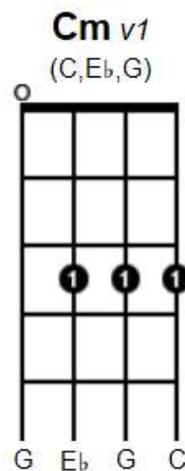
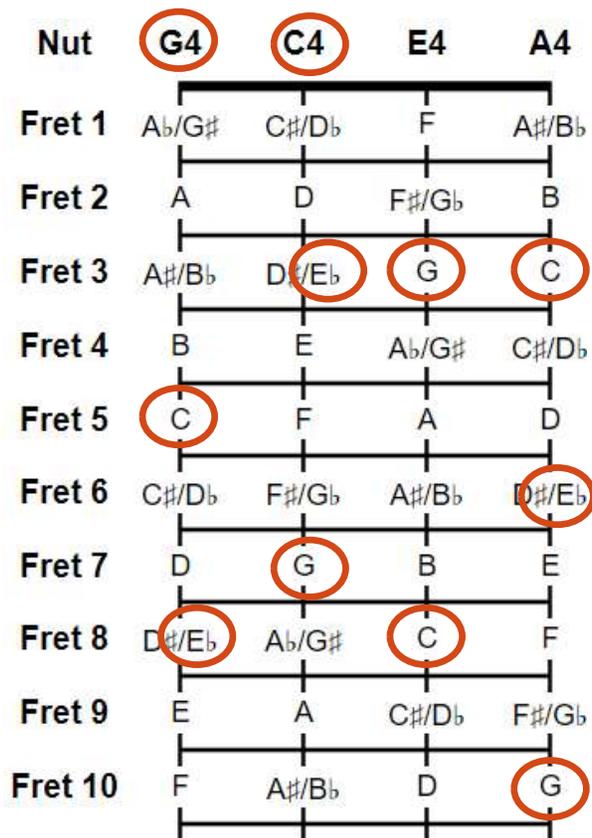
C Minor [Cm]

Notes

- C
- E_b
- G



FINDING MINOR CHORDS ON YOUR UKE



SEVENTH (7TH) CHORDS

- Jazzy, bluesy, romantic, serene, tranquil, exhilarant, strong, relentless, funky, soulful, moderate edginess
- Notes in a 7th Chord – it is a Major Chord with the addition of a 7th interval
 1. The root note
 2. A *Major* 3rd above it – 4 frets (i.e. half steps) away from the root note
 3. And the Perfect 5th – 7 frets (i.e. half steps) away from the root note
 4. And either the *Minor* 7th or the *Major* 7th depending on which type of 7th – 10 or 11 frets (i.e. half steps) away from the root note
- There are many, many types of 7th chords
 - Many with 5+ notes
 - Most only used in Jazz
 - We mostly use the *Dominant* 7th (ex. [G7]) and sometimes the *Major* 7th (ex. [Gmaj7])

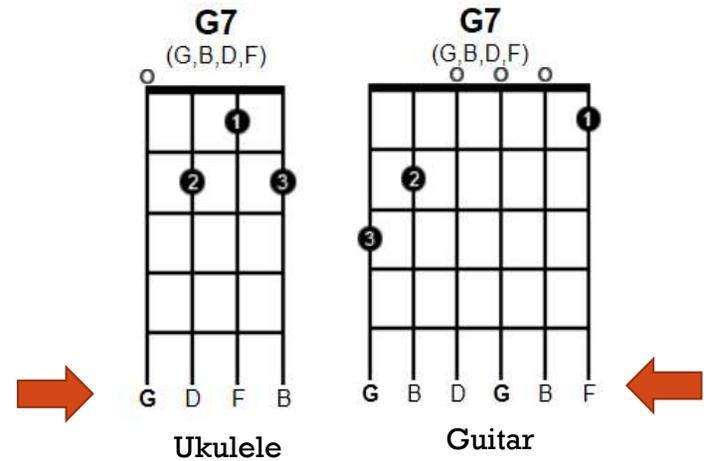
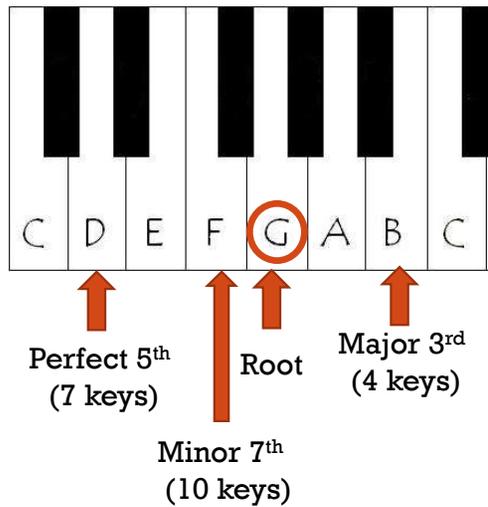


DOMINANT SEVENTH (7TH) CHORD

G Dominant 7th [G7]

Notes

G
B
D
F

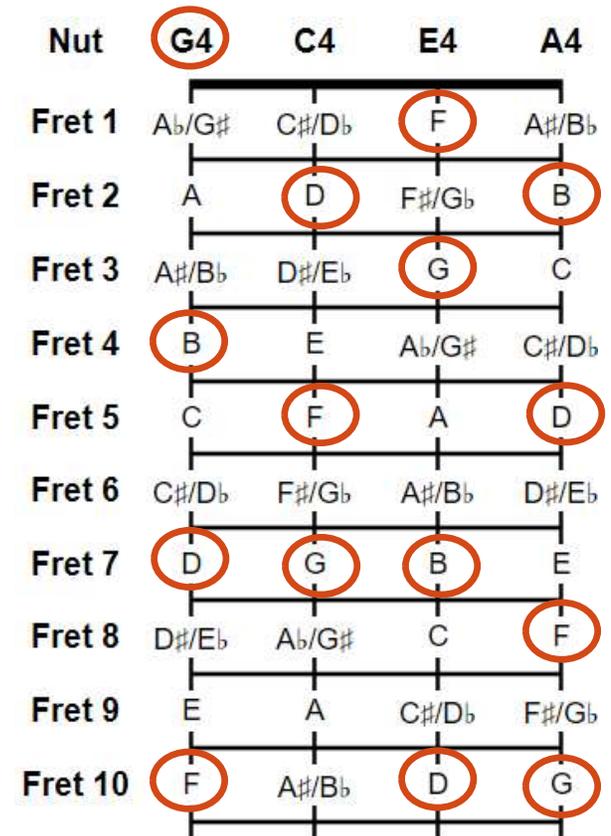
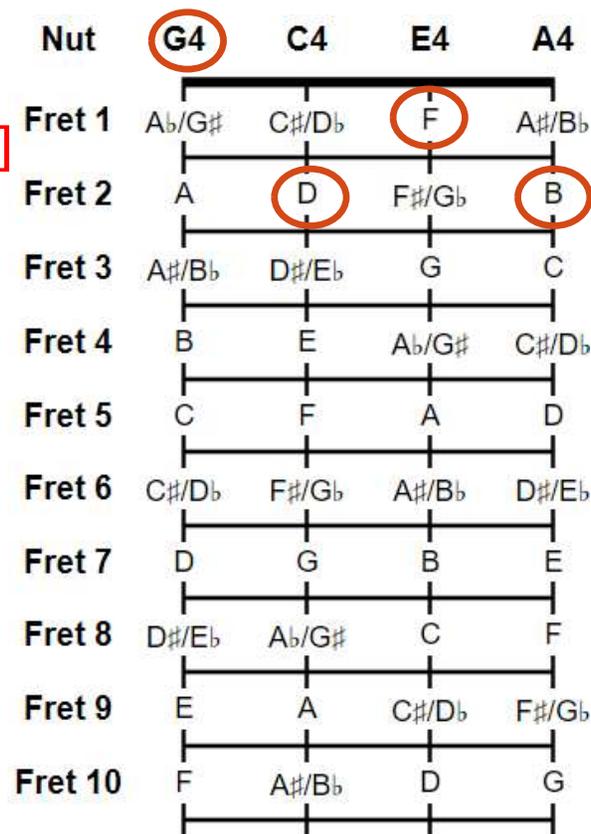


FINDING DOMINANT 7TH ON YOUR UKE

G Dominant 7th [G7]

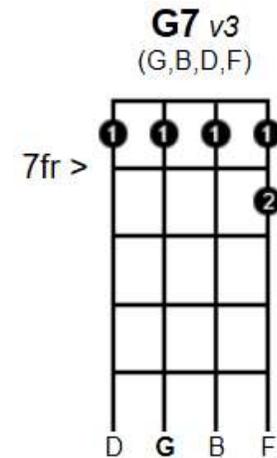
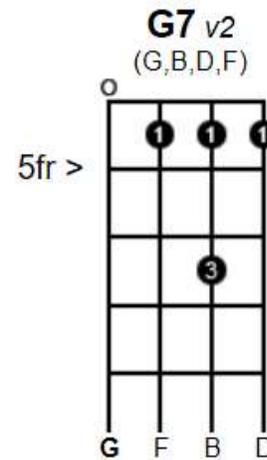
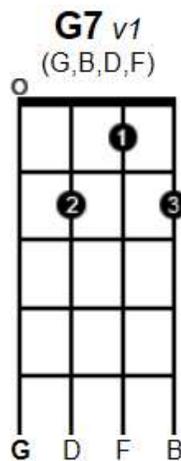
Notes

G
B
D
F



FINDING DOMINANT 7TH ON YOUR UKE

Nut	G4	C4	E4	A4
Fret 1	A \flat /G \sharp	C \sharp /D \flat	F	A \sharp /B \flat
Fret 2	A	D	F \sharp /G \flat	B
Fret 3	A \sharp /B \flat	D \sharp /E \flat	G	C
Fret 4	B	E	A \flat /G \sharp	C \sharp /D \flat
Fret 5	C	F	A	D
Fret 6	C \sharp /D \flat	F \sharp /G \flat	A \sharp /B \flat	D \sharp /E \flat
Fret 7	D	G	B	E
Fret 8	D \sharp /E \flat	A \flat /G \sharp	C	F
Fret 9	E	A	C \sharp /D \flat	F \sharp /G \flat
Fret 10	F	A \sharp /B \flat	D	G



EXERCISE – G MAJOR 7TH

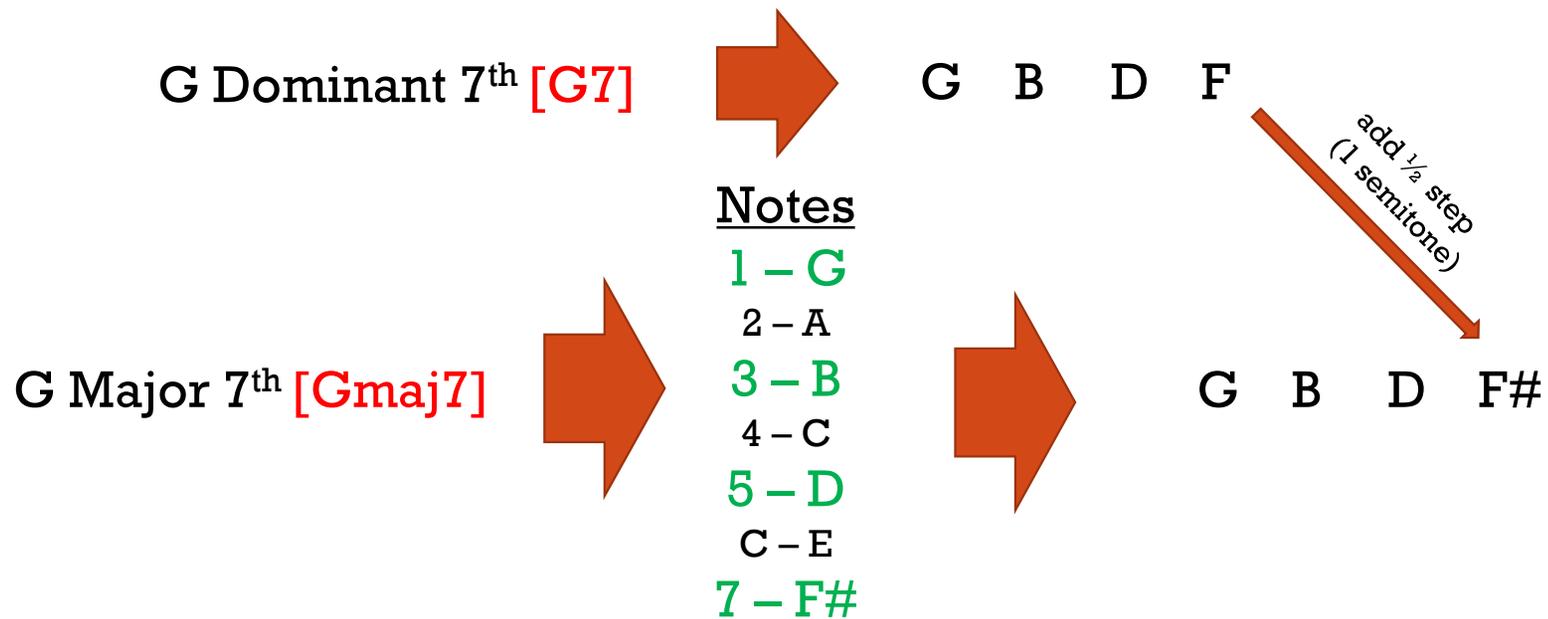
- What are the notes in a G Major 7th [Gmaj7] chord?
- The Major 7th chord is the same as the Dominant 7th chord except:
 - The Minor 7th is raised $\frac{1}{2}$ step (1 semitone) to become a Major 7th

G Dominant 7th [G7]  G B D F



EXERCISE – G MAJOR 7TH

- What are the notes in a G Major 7th [Gmaj7] chord?



EXERCISE — G MAJOR 7TH

Find the notes
G B D F#

	Nut	G4	C4	E4	A4
Fret 1		A \flat /G \sharp	C \sharp /D \flat	F	A \sharp /B \flat
Fret 2		A	D	F \sharp /G \flat	B
Fret 3		A \sharp /B \flat	D \sharp /E \flat	G	C
Fret 4		B	E	A \flat /G \sharp	C \sharp /D \flat
Fret 5		C	F	A	D
Fret 6		C \sharp /D \flat	F \sharp /G \flat	A \sharp /B \flat	D \sharp /E \flat
Fret 7		D	G	B	E
Fret 8		D \sharp /E \flat	A \flat /G \sharp	C	F
Fret 9		E	A	C \sharp /D \flat	F \sharp /G \flat
Fret 10		F	A \sharp /B \flat	D	G



EXERCISE — G MAJOR 7TH

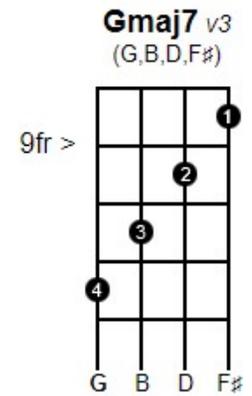
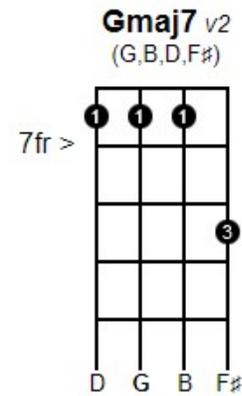
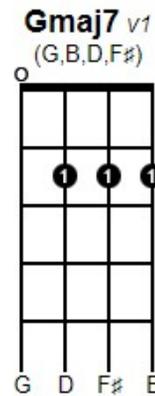
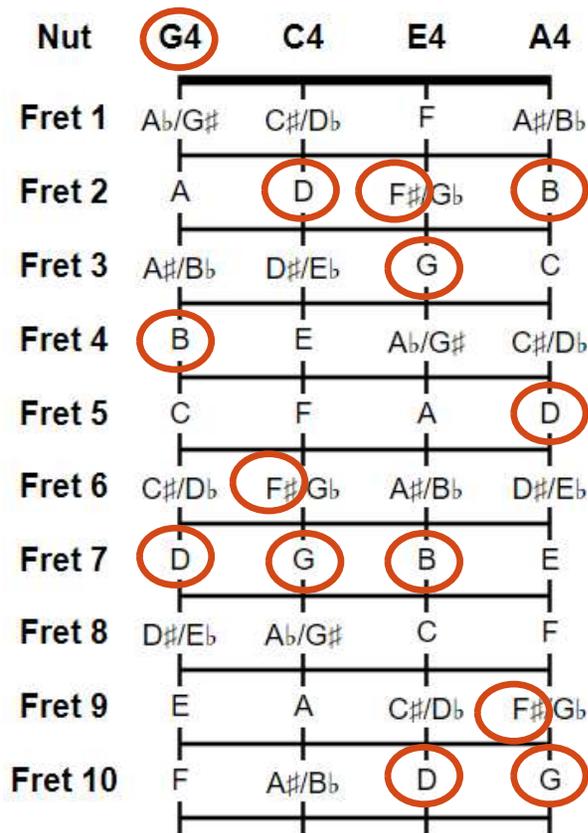
Find the notes
G B D F#

	Nut	G4	C4	E4	A4
Fret 1	Ab/G#	C#/Db	F	A#/Bb	
Fret 2	A	D	F#/Gb	B	
Fret 3	A#/Bb	D#/Eb	G	C	
Fret 4	B	E	Ab/G#	C#/Db	
Fret 5	C	F	A	D	
Fret 6	C#/Db	F#/Gb	A#/Bb	D#/Eb	
Fret 7	D	G	B	E	
Fret 8	D#/Eb	Ab/G#	C	F	
Fret 9	E	A	C#/Db	F#/Gb	
Fret 10	F	A#/Bb	D	G	



EXERCISE – G MAJOR 7TH

Find some shapes

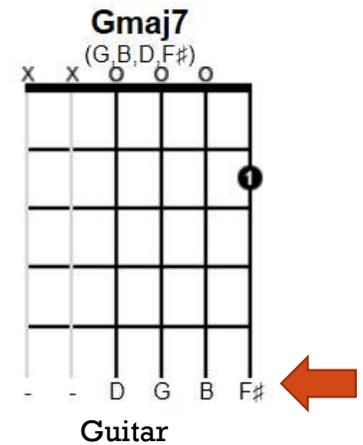
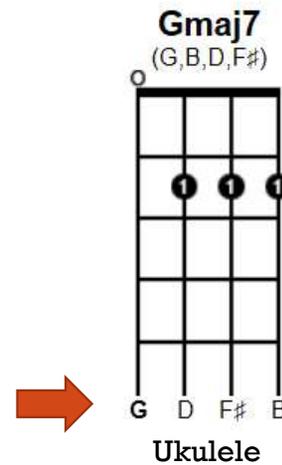
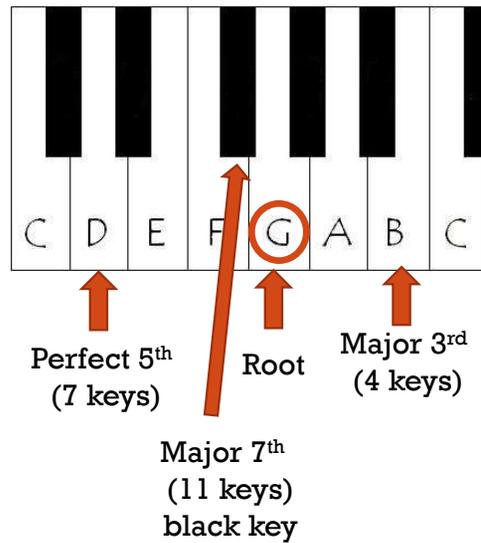


MAJOR SEVENTH (7TH) CHORD

G Major 7th [Gmaj7]

Notes

G
B
D
F#





QUESTIONS?