

# 5 Interval Geometry

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## INTERVALS AND SYMBOLS

In harmony the distance between notes is measured up or down using whole steps (two frets), and half steps (one fret).

Each distance or interval is given a name:

<u>Root</u>	<u>Up</u>	or	<u>Down</u>	=	<u>Is Called</u>	<u>Written As</u>
"C"	6 whole steps		6 whole steps	=	"C", an octave	8
"C"	1 whole step		.....	=	"D", a major 2rd	2
"C"	1½ whole steps		.....	=	"E♭", a minor 3rd	mi. 3 or ♭3
"C"	2 whole steps		.....	=	"E", a major 3rd	Ma. 3, 3 or Δ3
"C"	2½ whole steps		.....	=	"F", a perfect 4th	4
"C"	3 whole steps		3 whole steps	=	"G♭", a diminished 5th	flat 5 or ♭5
"C"	3½ whole steps		2½ whole steps	=	"G", a perfect 5th	5
"C"	4 whole steps		2 whole steps	=	"G♯", an augmented 5th	+5
"C"	4½ whole steps		1½ steps	=	"A", a major 6th	Ma. 6, 6 or Δ6
"C"	5 whole steps		1 step	=	"B♭", a minor 7th	flat 7, 7 or ♭7
"C"	5½ whole steps		½ step	=	"B", a major 7th	Ma. 7 or Δ7

## UPPER EXTENSIONS



When describing an interval further than one octave above the root, the number seven (7) is added to the interval name.

Example:

“C” is the root

“D” is the major 2nd

One octave above “D” is called the Major 9th

It follows:

“F” is the 4th = one octave above “F” = 11th

“A” is the 6th = one octave above “A” = 13th

In everyday chord usage:

10ths are known as 3rds

12ths are known as 5ths

14ths are known as 7ths

15th are known as octaves

The exception is the 2nd, which is almost always referred to as a 9th!

## Exercises

Using workbook pages 225 through 231, complete the interval exercises.

## INTERVAL GEOMETRY

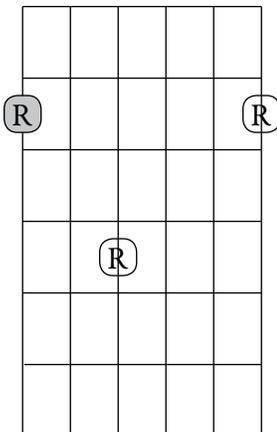


Octave = The same note 12 frets away

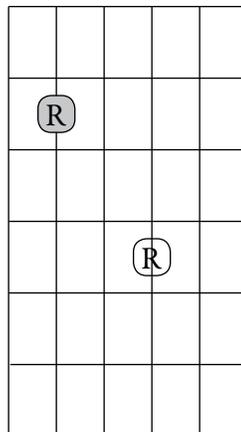
If “C” is the root, then “C” is also the octave.

### I and I

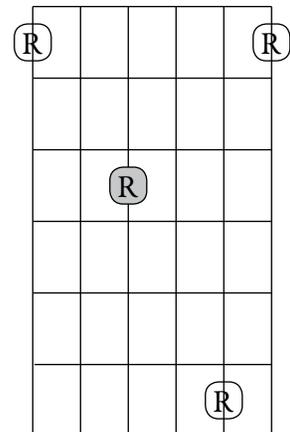
OCTAVE



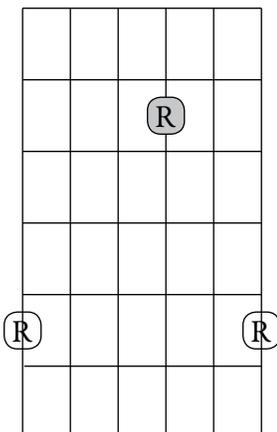
OCTAVE



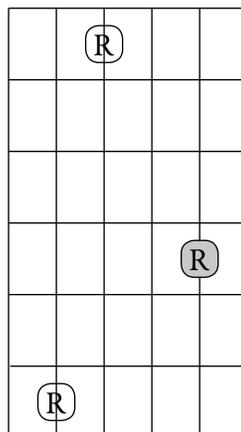
OCTAVE



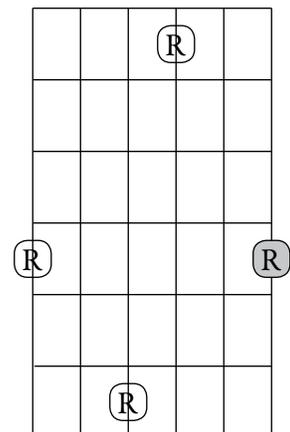
OCTAVE



OCTAVE



OCTAVE

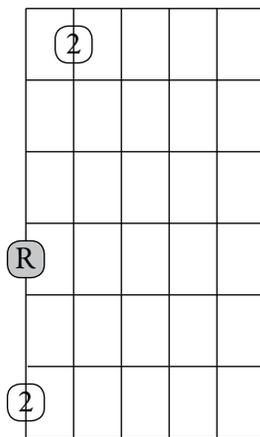


**Major 2nd = Two frets above root (or ten frets below)**

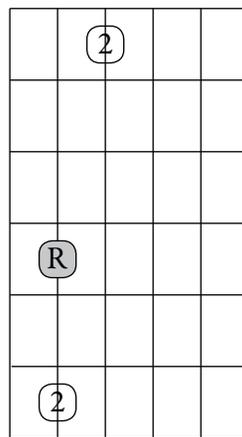
If “C” is the root (I), then “D” is the major 2nd (II).

**I and II**

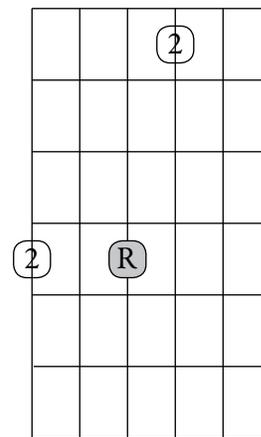
Major 2nd



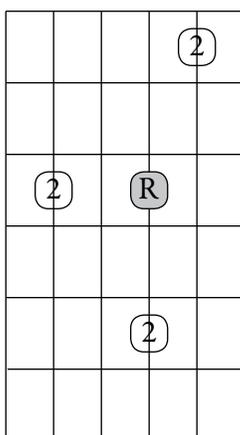
Major 2nd



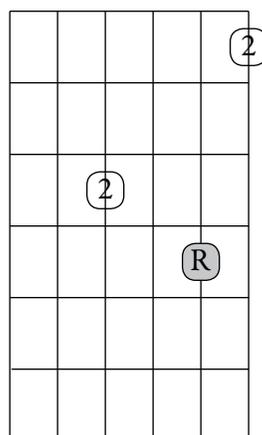
Major 2nd



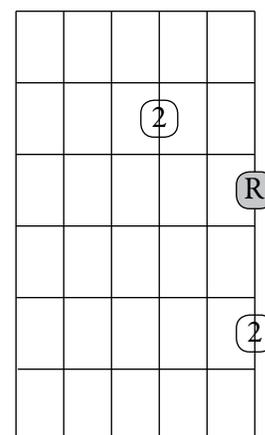
Major 2nd



Major 2nd



Major 2nd



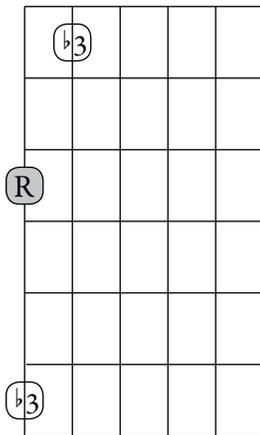
**Minor 3rd = Three frets above root (or nine frets below)**



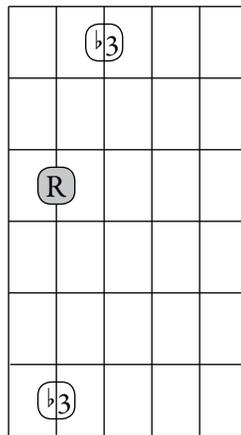
If “C” is the root (I), then “E<sup>b</sup>” is the minor 3rd (<sup>b</sup>III or <sup>b</sup>3).

**I and <sup>b</sup>III**

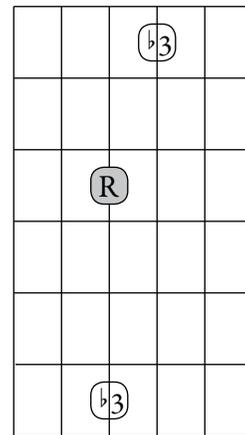
Minor 3rd



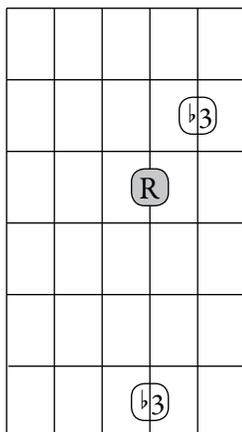
Minor 3rd



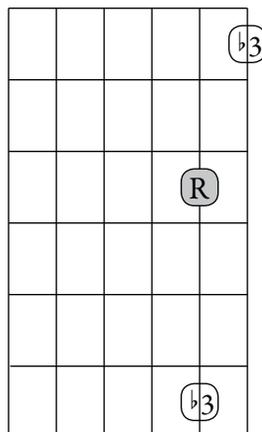
Minor 3rd



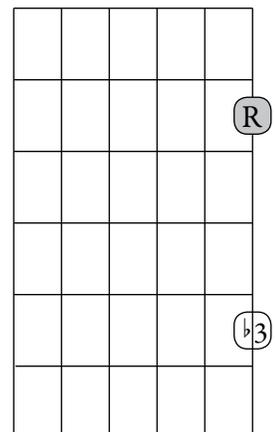
Minor 3rd



Minor 3rd



Minor 3rd

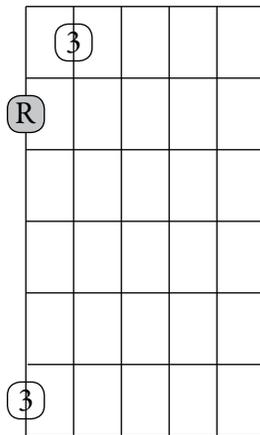


**Major 3rd = Four frets above root (or eight frets below)**

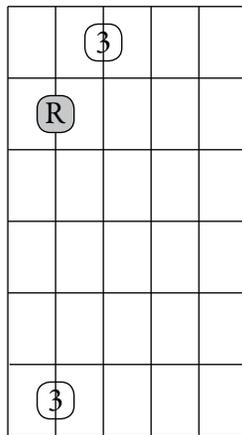
If “C” is the root (I), then “E” is the major 3rd (III).

**I and III**

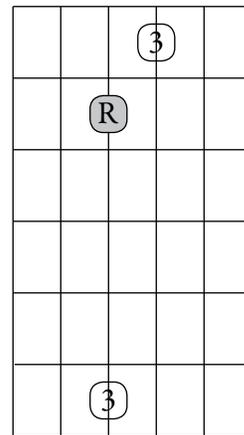
Major 3rd



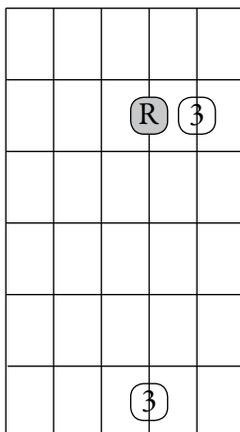
Major 3rd



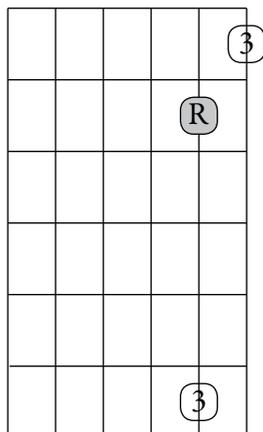
Major 3rd



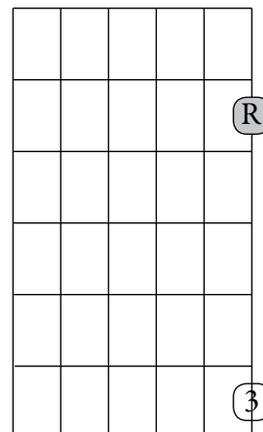
Major 3rd



Major 3rd



Major 3rd

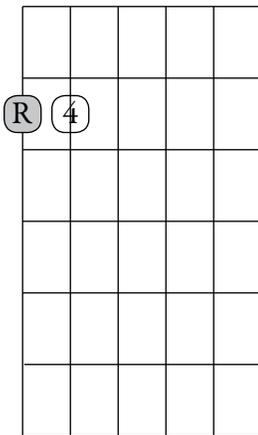


**Perfect (Normal) 4th = Five frets above root (or seven frets below)**

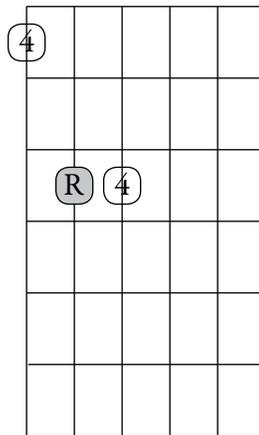
If “C” is the root (I), then “F” is the perfect (normal) 4th (IV).

**I and IV**

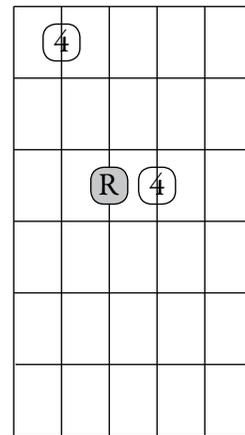
Perfect 4th



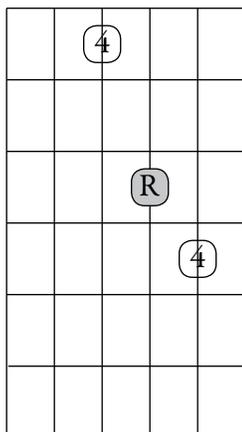
Perfect 4th



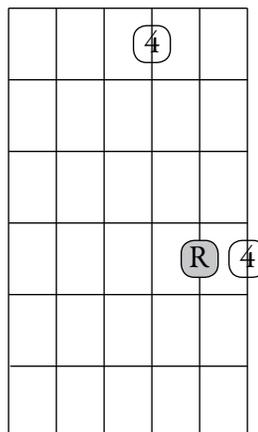
Perfect 4th



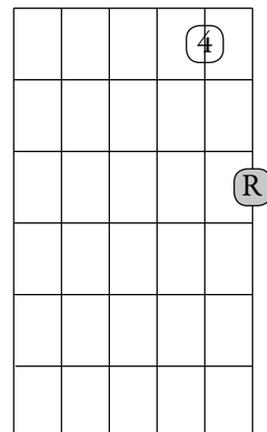
Perfect 4th



Perfect 4th



Perfect 4th

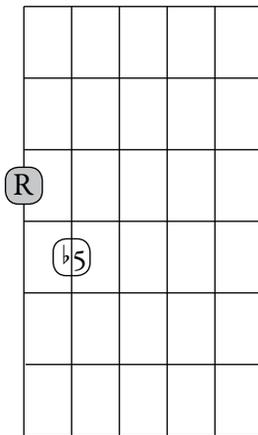


**Diminished/Flatted 5th = Six frets above root (or six frets below)**

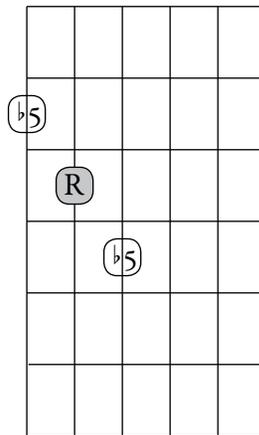
If “C” is the root (I), then “G<sup>b</sup>” is the flatted 5th (<sup>b</sup>V).

**I and <sup>b</sup>V**

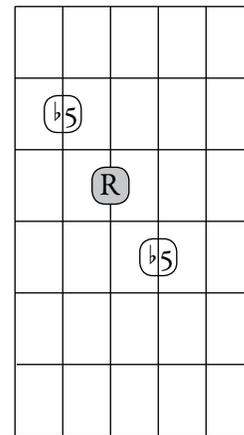
<sup>b</sup>5



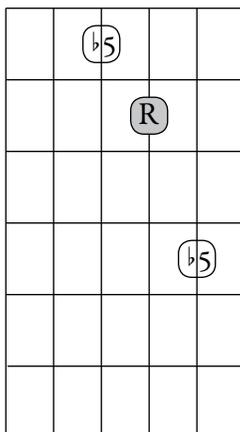
<sup>b</sup>5



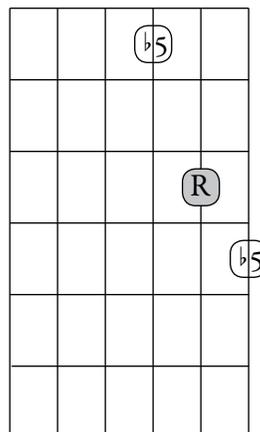
<sup>b</sup>5



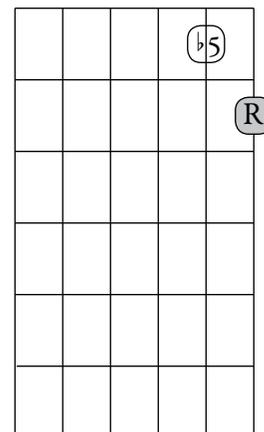
<sup>b</sup>5



<sup>b</sup>5



<sup>b</sup>5

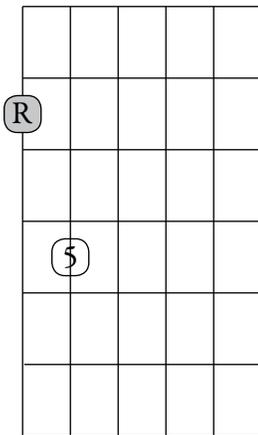


**Perfect (Normal) 5th = Seven frets above root (or five frets below)**

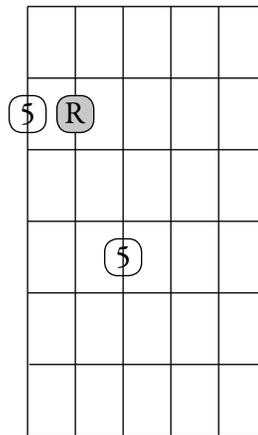
If “C” is the root (I), then “G” is the perfect (normal) 5th (V).

**I and V**

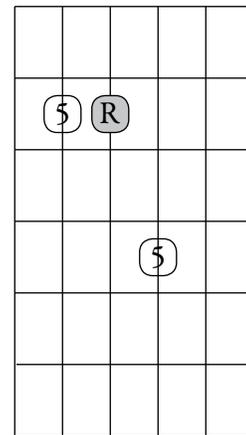
Perfect 5th



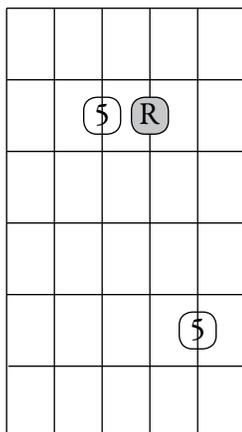
Perfect 5th



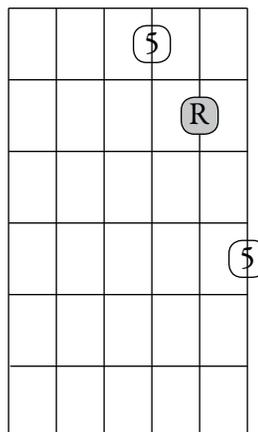
Perfect 5th



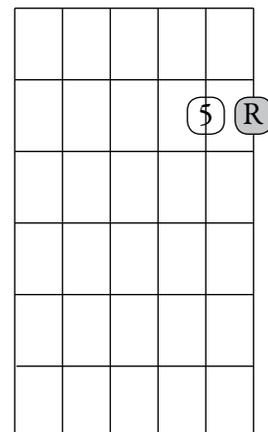
Perfect 5th



Perfect 5th



Perfect 5th



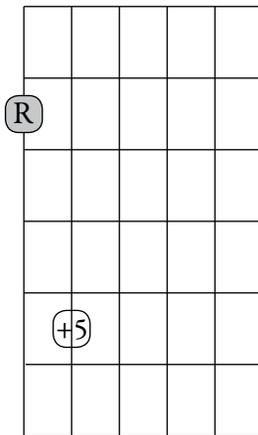
**Minor 6th or Augmented 5th = Eight frets above root (or four frets below)**

If "C" is the root (I), then "G#" is the augmented 5th (+V or +5).

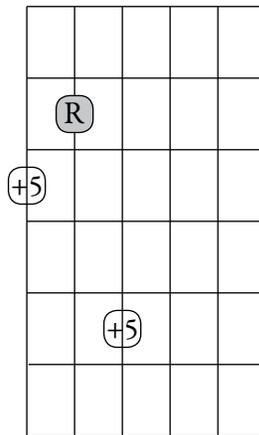


**I and +V**

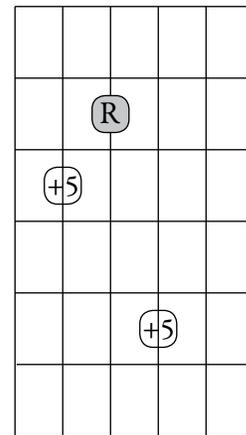
+5



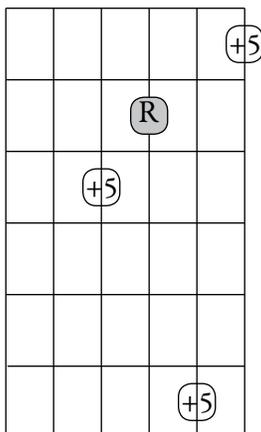
+5



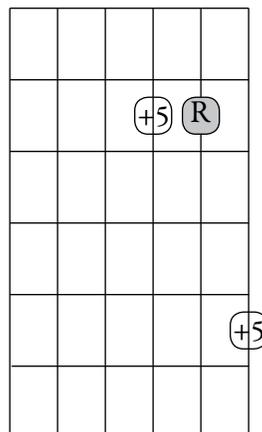
+5



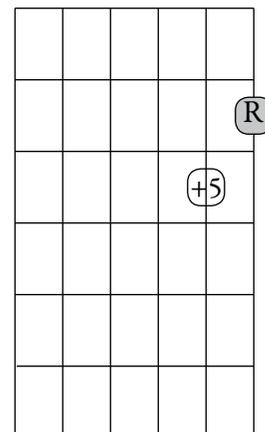
+5



+5



+5

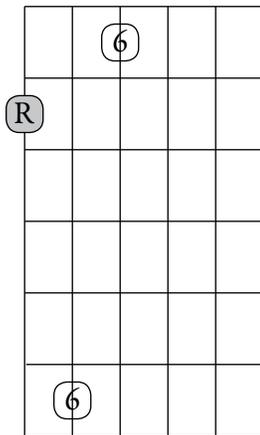


**Major 6th = Nine frets above root (or three frets below)**

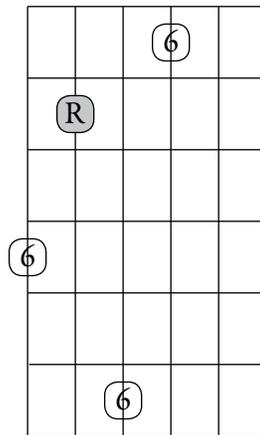
If “C” is the root (I), then “A” is the major 6th (VI).

**I and VI**

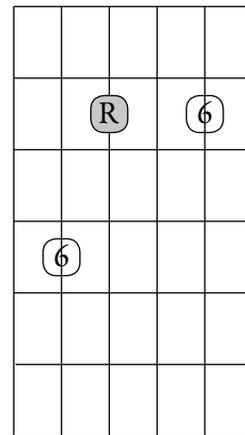
Major 6th



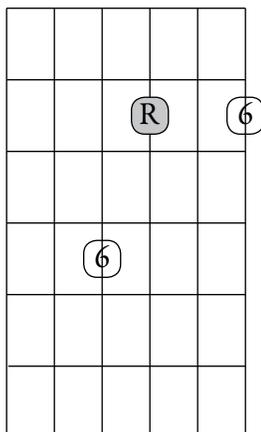
Major 6th



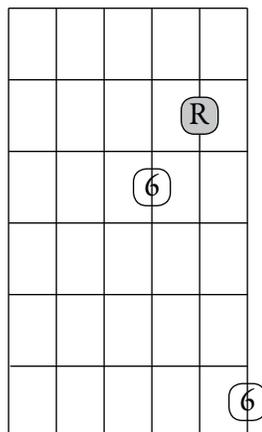
Major 6th



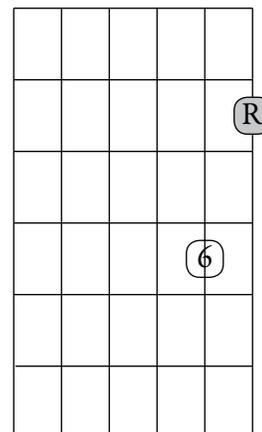
Major 6th



Major 6th



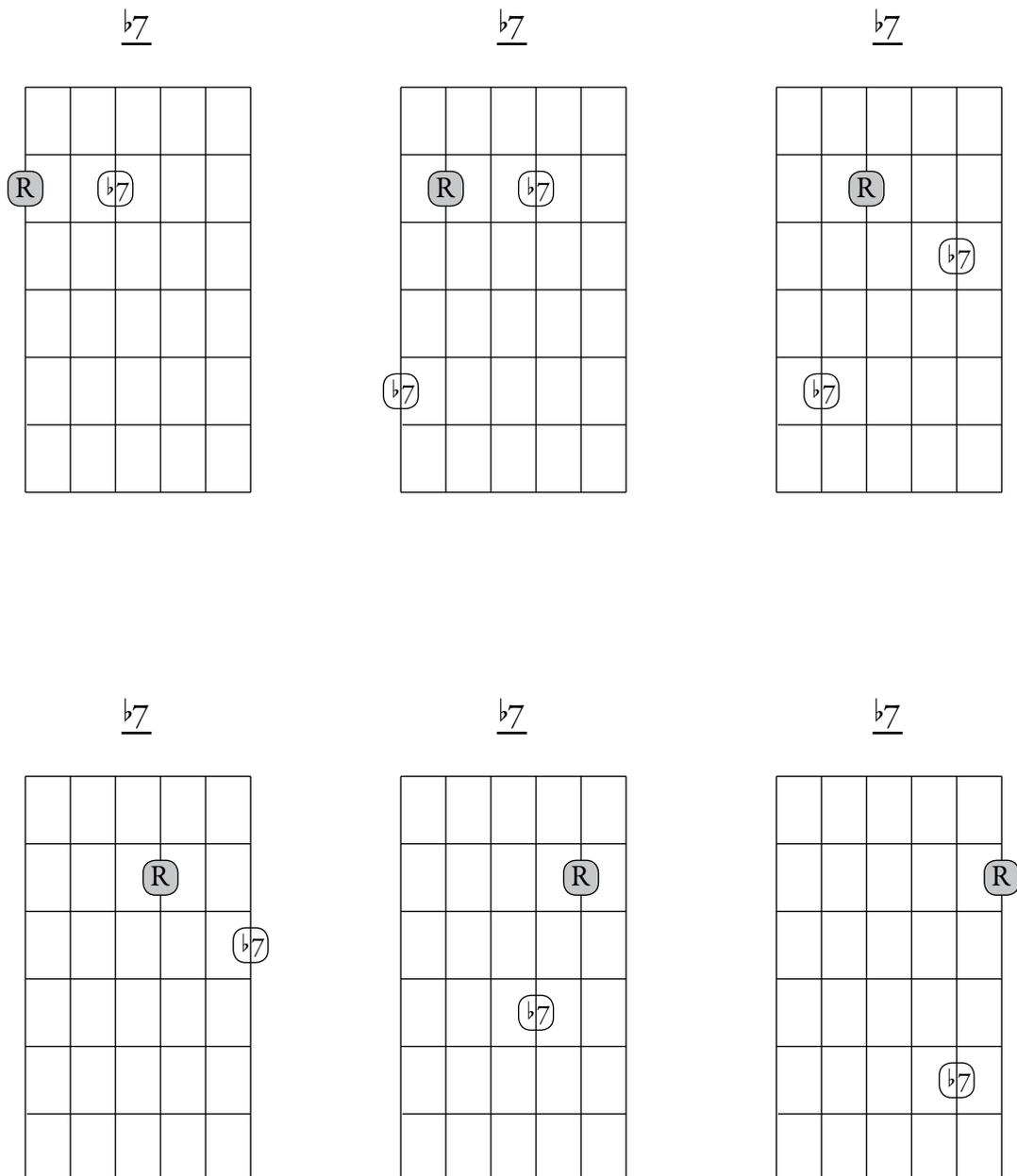
Major 6th



**Flatted 7th = Ten frets above root (or two frets below)**

If “C” is the root (I), then “B<sup>b</sup>” is the flatted 7th (<sup>b</sup>VII or <sup>b</sup>7).

**I and <sup>b</sup>VII**

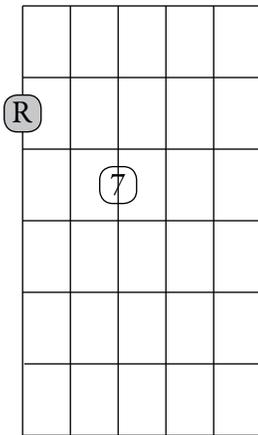


**Major 7th = Eleven frets above root (or one fret below)**

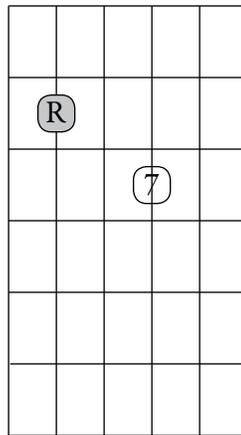
If “C” is the root (I), then “B” is the major 7th (VII).

**I and VII**

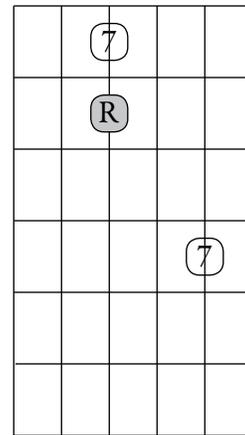
Major 7th



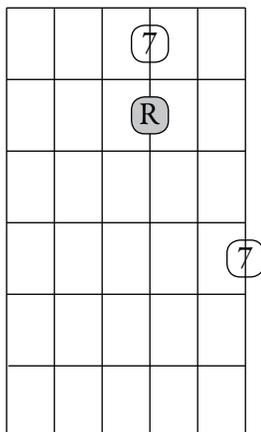
Major 7th



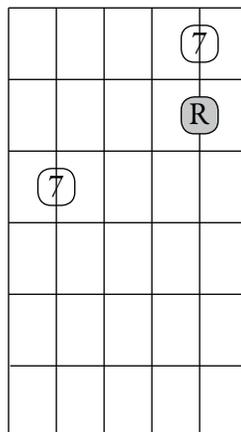
Major 7th



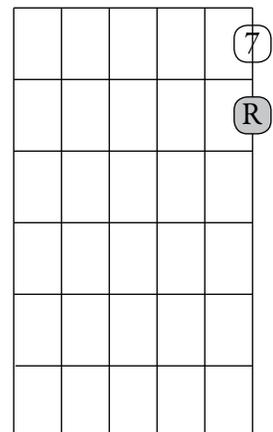
Major 7th



Major 7th



Major 7th



**Exercises**

Using workbook pages 232 through 238, draw the interval shapes.

