

The interval between the keynote of a major scale and the unison, 4th, 5th or octave of that scale is called a **PERFECT INTERVAL**.

Perfect Unison      Perfect 4th      Perfect 5th      Perfect Octave

The interval between the keynote of a major scale and the 2nd, 3rd, 6th or 7th of that scale is called a **MAJOR INTERVAL**.

Major 2nd      Major 3rd      Major 6th      Major 7th

### THE DIATONIC INTERVALS OF THE MAJOR SCALE

When the keynote and the upper note of an interval are from the same major scale, it is called a **DIATONIC INTERVAL**. All diatonic intervals in the major scale are either perfect (P) or major (M). The perfect intervals are the unison, 4th, 5th and octave; the major intervals are the 2nd, 3rd, 6th and 7th. This is true for all major scales. P1 indicates a perfect unison; P8 indicates a perfect octave.

P1 Unison      M2      M3      P4      P5      M6      M7      P8 Octave

### Exercises

- 1 Name the harmonic intervals and indicate whether they are perfect or major.

M3      \_\_\_\_\_

- 2 Write the note above the given note to complete the harmonic interval.

P5      P8      M3      M7      M6      P4      M2      P1

# Minor Intervals

When the interval between the two notes of a major interval (2nd, 3rd, 6th or 7th) is decreased by a *half step* they become MINOR INTERVALS. For example, a major 3rd (M3) becomes a minor 3rd (m3) when decreased by a half step. A small letter "m" is used to signify a minor interval. Only major intervals may be made into minor intervals—perfect intervals may not.

How major intervals may be changed to minor intervals:

2nds: M2, m2, M2, m2, M2, m2

3rds: M3, m3, M3, m3, M3, m3

6ths: M6, m6, M6, m6, M6, m6

7ths: M7, m7, M7, m7, M7, m7

## Exercises

1 Name the intervals.

m6 \_\_\_\_\_

2 Write the note above the given note to complete the harmonic interval.

m3   m6   m2   m7   m2   m6   m3   m7

3 Name the intervals, indicating whether they are perfect (P), major (M) or minor (m).

P5 \_\_\_\_\_

The word *augmented* means "made larger." When a perfect or major interval is made larger by a *half step*, it becomes an AUGMENTED INTERVAL. For example, a perfect 5th (P5) becomes an augmented 5th (aug 5). To raise a sharp note by a half step, use a DOUBLE SHARP ♯♯.

A musical staff in G major (one sharp) showing augmented intervals. The notes are: G-A (aug 1), G-B (aug 2), G-C# (aug 3), G-D# (aug 4), G-E# (aug 5), G-F# (aug 6), G-G# (aug 7), and G-A# (aug 8). The notes are written as pairs of whole notes on a treble clef staff.

The word *diminished* means "made smaller." With the exception of the perfect unison, any perfect or minor interval that is made smaller by a *half step* becomes a DIMINISHED INTERVAL. For example, a perfect 4th (P4) becomes a diminished 4th (dim 4). To lower a flat note by a half step, use a DOUBLE FLAT ♭♭.

A musical staff in G major showing diminished intervals. The notes are: G-Ab (dim 2), G-Bb (dim 3), G-C (dim 4), G-D (dim 5), G-E (dim 6), G-F (dim 7), and G-G (dim 8). The notes are written as pairs of whole notes on a treble clef staff.

Since lowering either note of a perfect unison would actually *increase* its size, the perfect unison cannot be diminished, only augmented.

When the keynote and the upper note of an interval are *not* from the same major scale, it is called a CHROMATIC INTERVAL. Minor, diminished, and augmented intervals are always chromatic intervals in major keys.

## Exercises

- 1 Name the augmented intervals.

A musical staff in G major showing augmented intervals: G-A (aug 1), G-B (aug 2), G-C# (aug 3), G-D# (aug 4), G-E# (aug 5), G-F# (aug 6), G-G# (aug 7), and G-A# (aug 8). The notes are written as pairs of whole notes on a bass clef staff. The label "aug 5" is written below the first interval.

- 2 Write the note above the given note to complete the augmented harmonic interval.

A musical staff in G major showing augmented intervals: G-A (aug 1), G-B (aug 2), G-C# (aug 3), G-D# (aug 4), G-E# (aug 5), G-F# (aug 6), G-G# (aug 7), and G-A# (aug 8). The notes are written as pairs of whole notes on a treble clef staff.

- 3 Name the diminished intervals.

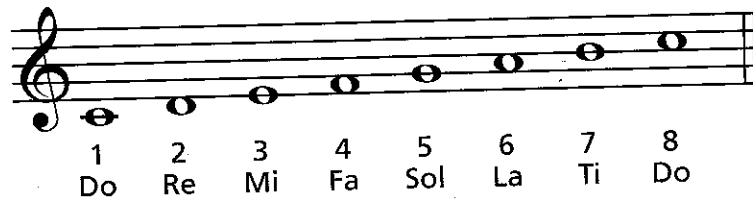
A musical staff in G major showing diminished intervals: G-Ab (dim 2), G-Bb (dim 3), G-C (dim 4), G-D (dim 5), G-E (dim 6), G-F (dim 7), and G-G (dim 8). The notes are written as pairs of whole notes on a treble clef staff. The label "dim 5" is written below the first interval.

- 4 Write the note above the given note to complete the diminished harmonic interval.

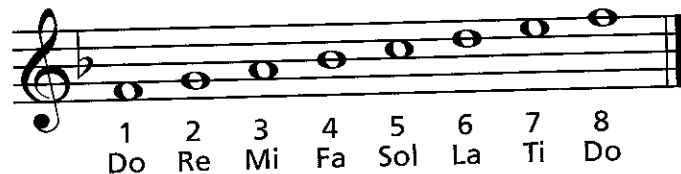
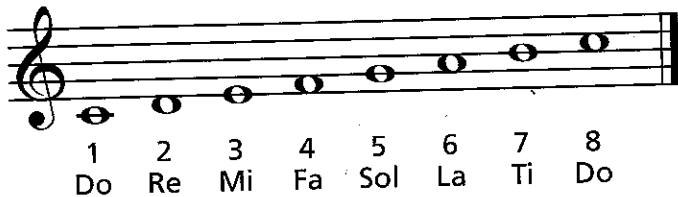
A musical staff in G major showing diminished intervals: G-Ab (dim 2), G-Bb (dim 3), G-C (dim 4), G-D (dim 5), G-E (dim 6), G-F (dim 7), and G-G (dim 8). The notes are written as pairs of whole notes on a bass clef staff.

# Solfège and Transposition

SOLFÈGE is a system of reading notes by assigning a different syllable to each note. The following syllables are used for all major scales as they relate to the scale degrees:

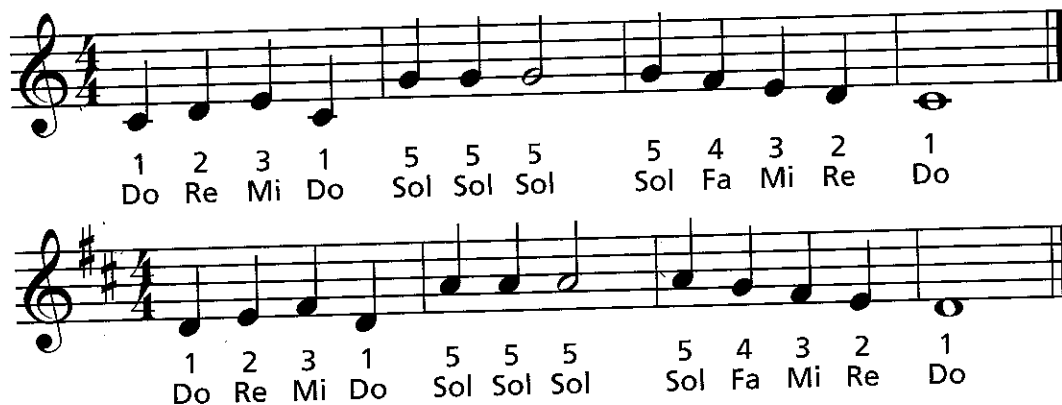


MOVEABLE DO means that the syllables apply to the same scale degrees, regardless of what key you are in. For example, in the key of C, the keynote C is called "Do". In the key of F, the keynote F is also called "Do".



When a melody is rewritten with the exact same sequence of notes and intervals into another key, it is called TRANSPOSITION. This raises or lowers the notes to make a melody easier to sing or play, or so it can be played by an instrument in another key.

The easiest way to transpose is by interval. For example, if a melody is in the key of C and you want to transpose it to the key of D, then you would rewrite all notes a major 2nd higher.

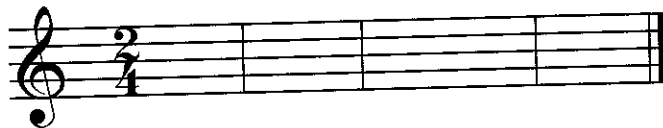


## Exercises

- Write the syllable names under the notes of the following melody.



- Add solfège syllables, then transpose the following melody up a major 2nd adding solfège syllables. Add the new key signature.



- Add solfège syllables, then transpose the following melody down a major 2nd adding solfège syllables. Add the new key signature.



**1** A perfect interval is the distance between the root of a major scale and the \_\_\_\_\_  
 \_\_\_\_\_  
 or \_\_\_\_\_.

**2** A major interval is the distance between the root of a major scale and the \_\_\_\_\_  
 \_\_\_\_\_  
 or \_\_\_\_\_.

**3** The two types of diatonic intervals are \_\_\_\_\_  
 and \_\_\_\_\_.

**4** Name the intervals below and indicate whether they are major (M), perfect (P) or minor (m).

m3 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

**5** Write the notes above the given notes to complete the harmonic interval.

P4 m6 M3 P1 M6 m7 P8 M2 P5 M7 m2 m3

**6** A diminished interval occurs when a perfect or minor interval is made:  
 (circle one) larger smaller

**7** An augmented interval occurs when a major or perfect interval is made:  
 (circle one) larger smaller

**8** Minor, diminished, and augmented intervals are called \_\_\_\_\_ intervals.

**9** Write the solfège syllable names under the notes of the following melody.

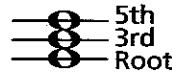
Joy to the World George Frideric Handel (1685–1759)

**10** Transposition is when a melody is rewritten in another \_\_\_\_\_.

**11** Transpose the following melody up a major 2nd and write the new key signature.

Symphony in G, No. 94 ("The Surprise"), 2nd movement Franz Joseph Haydn (1732–1809)

When three or more notes are sounded together, the combination is called a CHORD. When a 3-note chord consists of a ROOT, a 3rd and a 5th, it is called a TRIAD.



The root is the note from which the triad gets its name. To build a triad, measure the 3rd and the 5th upward from the root.

C Major Scale

1 2 3 4 5 6 7 8  
Root

C Triad

5th  
3rd  
Root

The root of a C triad is C. When a triad is in ROOT POSITION, it will include every other note (C-E-G, D-F-A, E-G-B, etc.). All the notes will be on lines or all the notes will be in spaces.

C Triad

5th  
3rd  
Root

C Triad

5th  
3rd  
Root

Triads may be built on any note of the scale. In the C major scale, the root position triads are:

C D E F G A B C

## Exercises

- 1** Build triads using each of the following *line* notes as the root. Name the root note.

\_\_\_\_\_

- 2** Build triads using each of the following *space* notes as the root. Name the root note.

\_\_\_\_\_

- 3** Add two notes (above or below) to create a triad in root position from the given 3rd or 5th. Name the root note.

\_\_\_\_\_

# Primary and Major Triads

The most important triads of a key are built on the 1st, 4th and 5th scale degrees of the major scale. They are called the PRIMARY TRIADS or PRIMARY CHORDS of the key and are identified by the ROMAN NUMERALS I (1), IV (4) and V (5). These three triads contain every tone in the major scale.

The primary triads are MAJOR TRIADS because they consist of the root, a major 3rd and a perfect 5th (see page 56).

Major 3rd + Perfect 5th = Major Triad

- There are two other ways of forming a major triad:
1. select the 1st, 3rd and 5th notes of a major scale.
  2. add the interval of a minor 3rd (see page 57) on top of a major 3rd.

In the key of C major, the  
 I triad (or chord) is the C triad (C-E-G).  
 IV triad (or chord) is the F triad (F-A-C).  
 V triad (or chord) is the G triad (G-B-D).

The primary triads in the key of C major:

I 2 3 IV V 6 7 8  
C Major F Major G Major

I 2 3 IV V 6 7 8  
C Major F Major G Major

## Exercises

- 1** Build the primary triads in root position for each scale by adding two notes to the 1st, 4th and 5th notes of each scale to complete the triad. Name each triad.

a. 
  
I 2 3 IV V 6 7 8

b. 
  
I 2 3 IV V 6 7 8

c. 
  
I 2 3 IV V 6 7 8

d. 
  
I 2 3 IV V 6 7 8

- 2** Write the primary triads in root position for each key. Name each triad.

a. 
  
I IV V

b. 
  
I IV V

c. 
  
I IV V

d. 
  
I IV V

# Scale Degree Names

Each tone of a scale can be identified by a name as well as by a **numbered scale degree** (see page 43). The most important scale degrees are the same as those on which the primary chords are built: 1, 4 and 5. The three most important scale degree names are the **Tonic (I)**, **Subdominant (IV)** and **Dominant (V)**.

## TONIC (I)

The keynote of a scale is called the TONIC. It is the lowest *and* highest tone of the scale. Since the tonic is the **1st** scale degree, it is given the Roman numeral I. In C major, C is the tonic note or chord.

## DOMINANT (V) and SUBDOMINANT (IV)

The tone a 5th **above** the tonic is called the DOMINANT. Since the dominant is the **5th** scale degree, it is given the Roman numeral V. In C major, G is the dominant note or chord.

The tone a 5th **below** the tonic is called the SUBDOMINANT. Since the subdominant is the **4th** scale degree, it is given the Roman numeral IV. In C major, F is the subdominant note or chord. The prefix "sub" means under or below.

## Important!

The names of scale degrees were derived from an arrangement in which the tonic was the central tone. The subdominant was given its name because it is the same distance **below** the tonic as the dominant is **above** the tonic. It is not called subdominant because it is just below the dominant. See bottom staff.

## MEDIANT (iii) and SUBMEDIANT (vi)\*

The tone a 3rd degree **above** the tonic (midway between the tonic and the dominant) is called the MEDIANT (a Latin word meaning "in the middle"). Since the mediant is the **3rd** scale degree, it is given the Roman numeral iii. In C major, E is the mediant note or chord.

The tone a 3rd degree **below** the tonic (midway between the tonic and the subdominant) is called the SUBMEDIANT. Since the submediant is the **6th** scale degree, it is given the Roman numeral vi. In C major, A is the submediant note or chord.

## SUPERTONIC (ii) and LEADING TONE (vii)

The tone a 2nd degree **above** the tonic is called the SUPERTONIC. Since the supertonic is the **2nd** scale degree, it is given the Roman numeral ii. In C major, D is the supertonic note or chord. The prefix "super" means over or above.

The tone a 2nd degree **below** the tonic is called the LEADING TONE - sometimes called the SUBTONIC. Leading tone is most often used since the note has a strong tendency to "lead" to the tonic, as it does in an ascending scale. Since the leading tone is the **7th** scale degree, it is given the Roman numeral vii. In C major, B is the leading tone or chord.

In scale degree order, the name and Roman numeral of each scale tone is:

A musical staff in treble clef showing the notes of a scale in ascending order. Above each note is a label in a box: TONIC, SUPERTONIC, MEDIANT, SUBDOMINANT, DOMINANT, SUBMEDIANT, LEADING TONE, and TONIC. Below each note is its corresponding Roman numeral: I, ii, iii, IV, V, vi, vii, and I.

With the tonic being the central tone, the name and Roman numeral of each scale tone is:

A musical staff in treble clef showing the notes of a scale in order relative to the tonic. Above each note is a label in a box: SUBDOMINANT, SUBMEDIANT, LEADING TONE, TONIC, SUPERTONIC, MEDIANT, and DOMINANT. Below each note is its corresponding Roman numeral: IV, vi, vii, I, ii, iii, and V.

\*The reason for upper and lower case Roman numerals is explained in Unit 14, Lesson 58.



# The V7 (Dominant 7th) Chord

In many pieces, a V7 (dominant 7th) chord is used instead of a V (dominant) triad. To build a V7 chord, add a minor 7th above the root of the V triad (or a minor 3rd above the 5th). The V7 is a chord and not a triad because it has 4 notes rather than 3.

Dominant + minor 7th = Dominant 7th

Diagram illustrating the construction of a V7 chord by adding a minor 7th to a V triad. The V triad consists of the root, 3rd, and 5th. The V7 chord adds a minor 7th note above the root.

Dominant + minor 3rd = Dominant 7th

Diagram illustrating the construction of a V7 chord by adding a minor 3rd above the 5th of a V triad. The V triad consists of the root, 3rd, and 5th. The V7 chord adds a minor 3rd note above the 5th.

Often, the 5th of the V7 chord is omitted. The V7 chord then would have the same number of tones as the I and IV chords while still retaining the quality of a 7th chord. This also allows the music to be sung or performed by as few as three singers or instrumentalists.

The three primary chords are now I, IV and V7.

Diagram illustrating the three primary chords: I, IV, and V7. The V7 chord is shown with the 5th omitted, making it a three-note chord.

## Exercises

- 1** Write the V7 chord for each key. Write the key name and letter name of each chord.

Key of: C Major \_\_\_\_\_

Diagram illustrating the G7 chord in C major. The chord is written in treble clef with notes G, B, D, and F.

- 2** Fill in the missing notes in the following V7 chords. Which interval did you add? \_\_\_\_\_

Diagram illustrating V7 chords in bass clef: G7, D7, A7, C7, and F7. The 7th note is missing for each chord.

- 3** Write the following V7 chords with the 5th omitted—include the accidentals.

Diagram illustrating V7 chords in treble clef with the 5th omitted: F7, C7, G7, D7, and A7.

1 A chord consists of \_\_\_\_\_ or more notes sounded together.

2 A triad consists of a root, a \_\_\_\_\_ and a \_\_\_\_\_.

3 If the root of a triad is D, the 5th is the note \_\_\_\_\_.

4 If the 3rd of a triad is B, the root is the note \_\_\_\_\_.

5 Primary triads are built on the following notes of the scale: (circle one)  
a. I, II, V      b. I, IV, VI  
c. I, IV, V      d. II, IV, VI

6 A major 3rd + a \_\_\_\_\_ = a major triad.

7 In a major key, primary triads are always \_\_\_\_\_ triads.

8 Another way to form a major triad is by adding the interval of a \_\_\_\_\_ on top of the interval of a \_\_\_\_\_.

9 Write the primary triads in the keys of C and G major.

I      IV      V

I      IV      V

10 Write the primary triads in the keys of F and D major.

I      IV      V

I      IV      V

11 A I chord is also called the \_\_\_\_\_ chord.

14 A II chord is also called the \_\_\_\_\_ chord.

16 A VI chord is also called the \_\_\_\_\_ chord.

12 A V chord is also called the \_\_\_\_\_ chord.

15 A III chord is also called the \_\_\_\_\_ chord.

17 A VII chord is also called the \_\_\_\_\_ chord.

13 A IV chord is also called the \_\_\_\_\_ chord.

18 Write the following V7 chords. Include the accidentals.

G<sup>7</sup>      C<sup>7</sup>      D<sup>7</sup>      F<sup>7</sup>      A<sup>7</sup>