Melbourne Symphony Orchestra

Beethoven and Gaming Music

2026 MSO LEARNING RESOURCE

MSO.COM.AU/LEARNING

What if Beethoven was a video game composer?

Dr Richard Vaudrey explores the power and emotion of some of Beethoven's iconic orchestral music to find the perfect musical elements to create the next spectacular gaming score.

The concert Program performed by your Melbourne Symphony Orchestra:

KONDO	Zelda: Main Theme
BEETHOVEN	Coriolan Overture
BEETHOVEN	Symphony No. 7 movts ii and iv
BEETHOVEN	Symphony No. 5 movt i

The learning and creative activities below have been designed for classroom use by Primary school students and teachers attending the MSO Schools Concert.

"Learning activities" are more general in nature and support the development of general musical knowledge and understanding prior to, or after the concert.

"Creative activities" provide an opportunity for students to demonstrate their learning through composition following the concert.

Generalist and Specialist music teachers are encouraged to adapt these activities to best cater to the context of their learners.

Some opening questions about gaming music for class discussion:

Why do video games have music?

— *Enhance the mood of what is happening on screen and make the game more immersive*

— *Tell you things about certain characters or settings e.g. a character Leit Motif or danger is approaching*

How did video games and their music start out?

— *Early games had very small memory which limited the graphics and the audio*

— *Music was limited to "8-bit" audio and just 3 notes at a time*

— *This meant composers had to make things simple and repetitive*

- *Example 1 – Tetris (1989)*
- *Example 2 – Super Mario Brothers (1985)*
- *Example 3 – Pac-Man (1980)*

What about games today?

— *As technology improved, gaming music moved from computer generated digital sounds to recorded samples and into recordings of full orchestras.*

— *Some of the most famous composers in the world have written for games*

- *Example 1 – Skylanders by Hans Zimmer (2011)*
- *Example 2 – Ni No Kuni: Wrath of the White Witch by Joe Hisaishi (2011)*

Watch these two videos that explore the development of game music through the 1980's to today:

www.youtube.com/watch?v=EI48-GFb_a4

www.youtube.com/watch?v=OeBG0QIRNtY

Watch this fantastic video depicting the development of the iconic music from the *Legend of Zelda*

Some opening questions about Beethoven for class discussion:

How old is Beethoven and where is he from?

— *Born 1770 & died 1827*

— *Born in Germany but moved to Vienna, Austria*

Was Beethoven his first name?

— *No – his full name was Ludwig van Beethoven*

— *So, Beethoven was his family name.*

What sort of music did Beethoven compose?

— *Mostly symphonies for orchestra, solo piano works, string quartets and choral works.*

— *A brief look at the music of Beethoven from PianoTV.net*

Why is Beethoven so famous?

— *Renowned as a revolutionary composer of music who pushed and propelled the boundaries of musical expression during his time, creating some incredibly dramatic and groundbreaking works, much of which has stood the test of time and is still played by students and professionals around the world some 200 years after he wrote it.*

— *He was one of the pivotal figures that transitioned from Classical period music to the Romantic era.*

Why do orchestras play so much music by Beethoven?

— *Because it sounds amazing and lots of people love it!*

- *Example 1 – Symphony No. 5 movt. I*
- *Example 2 – Symphony No. 7 movt. II*

For a little fun

— *Can you **guess the game** that goes with **this** music?*

LEARNING ACTIVITY 1:
Instruments of the Orchestra

Who: Year 2 - 6 students
Resources: Internet and projector or student devices
Time required: From 15 - 90mins

Learning Intention: Students will develop vocabulary to name, categorise and describe the timbre/ tone colour of instruments.

Description: As a class, in groups or individually, spend time exploring *www.msolearn.com.au/orchestra* or listening to Beethoven's Symphony No. 7 streamed live by your Melbourne Symphony Orchestra.

NB: our 2026 Schools concert will hear movements ii and iv only.

CURRICULUM LINKS:

Victorian Curriculum F - 10 Version 2.0

- Developing Practices ***VC2AMU4D01***
- Exploring ***VC2AMU6E01***

Worksheet Questions & Answers:

(see below for printable worksheet)

1. List as many instruments of the orchestra as you can

a. ***Strings*** *(violin, viola, cello, double bass),*
b. ***Woodwinds*** *(flute, oboe, clarinet, bassoon, often with piccolo, English horn, bass clarinet),*
c. ***Brass*** *(horn, trumpet, trombone, tuba),*
d. ***Percussion*** *(timpani, snare, bass drum, cymbals, triangle, xylophone, etc.),*
e. ***plus sometimes additions like the harp or piano.***

2. Using a list of *timbre adjectives*, select words that you think best describe the sound of each of the instruments of the orchestra (if new to timbre *this video* may help explain)

3. Which instruments are played with a bow?

a. ***Strings*** *(violin, viola, cello, double bass)*

4. Name three instruments who often get to play the melody line?

a. *Violin, flute, clarinet + sometimes cello, bassoon*

5. List some of the instruments that tend to play more of an accompanying role in an orchestra

a. *Double bass, viola, cello, percussion*

6. Which instruments are hit or struck?

a. *Percussion (timpani, snare, bass drum, cymbals, triangle, xylophone, etc.)*

LEARNING ACTIVITY 1:
Instruments of the Orchestra

7. How can you tell the difference between a brass and a woodwind instrument?

a. *Woodwind have reeds and aside from the generally silver flute, are made of beautiful wood with oboe and clarinet made of black Grenadilla wood. The bassoon is the lowest sounding of the woodwind instruments. They usually sit in pairs in the middle towards the back rows of the orchestra. The Woodwinds' timbres can range from bright, nasal, and resonant through to smooth, warm, mellow and woody.*

b. *Brass are often used for impact in the louder moments of a symphony with Beethoven using trumpets and French horns to play fewer notes but in an exciting rhythmic way. Brass can often sound epic with bold, brash, bombastic and sonorous tone colour. Brass can sound beautifully gentle and sweet at times too... Trombone and tuba are the lowest sounding brass instruments.*

8. Which string instrument is not played with a bow?

a. Harp and piano

9. Draw a picture of your favourite sounding instrument. Why is it your favourite instrument?

a. Answers will vary

10. Name the instruments that have a double reed?

a. Bassoon and oboe

11. Which instrument do you think can play the loudest?

a. Trumpet

12. Which woodwind instrument is not made of wood?

a. Flute

13. Which brass instrument has a slide?

a. Trombone

14. Create a table to categorise the instruments into lowest / medium / highest sounds

***High** – Violin, flute, oboe*

***Medium** – viola, clarinet, trumpet, higher notes of cello, horn*

***Low** – Bassoon, double bass, bass clarinet, lower notes of cello, trombone, tuba*

15 Using scale from left to right across your page, place each instrument on a spectrum from most mellow and dark in tone colour/ timbre to brightest and brash. How does this compare to your table of low / medium / high sounds? Which instrument families are at the brightest/ brash end?

a. Answers will vary

16. Categorise each instrument in a table according to the Hornbostel-Sachs system:

***Chordophone** - makes sound by strings vibrating*

***Aerophone** - air used to make something vibrate*

***Electrophone** - uses electricity to make vibrations*

***Membranophone** - An instrument with a membrane or skin that vibrates*

***Idiophone** - the instrument itself vibrates to create sound*

ADDITIONAL ACTIVITIES/RESOURCES

- ***Young Person's Guide to the Orchestra*** by Benjamin Britten *New Jersey Symphony Orchestra*
- **Instruments of the Orchestra w. Solo videos from** *The Musicologist*
- **Name the instrument by sound and other fun games** - *https://kids.carnegiehall.org/quizzes*
- *Worksheets* from Western Australian Symphony Orchestra learning resources (pg 24 - 28)
- *A catchy song about the instruments of the orchestra from Hopscotch*

LEARNING ACTIVITY 2:
Drawing Melodies

Who: Year 2 - 6 students
Resources: Audio playback, paper, pencil
Time required: 15 - 30mins

Learning Intention: Students demonstrate ability to identify melodic lines in an excerpt of an orchestral music, representing pitch contour visually and using adjectives to describe the contour.

Description: Open the activity by establishing vocabulary for describing *melodic contour*.

Terms such as ascending/ descending, smooth, angular, wavey, step/ skip/ leap will allow students to provide a description of melodic contour.

Asking students to use their finger to draw the contour in the air helps visualise the rise and fall of melodies.

Practise drawing these melodies in the air as a class before individually drawing the melodic contour and circling the words best describing the melody from the columns on the right:

CURRICULUM LINKS:

Victorian Curriculum F - 10 Version 2.0

- Developing Practices ***VC2AMU4D01***
- Exploring ***VC2AMU6E01***

	Draw the melodic contour		
Ode to Joy **Theme from the 4th movt. of Beethoven 9**	Ascending Descending Static / flat Wavey Arch	Smooth Angular Jumpy	Steps Skips Leap
Twinkle Twinkle Little Star **Theme from Mozart's 12 Variations**	Ascending Descending Static / flat Wavey Arch	Smooth Angular Jumpy	Steps Skips Leap
Tetris **Theme based on a 19thC folk song Korobeiniki arranged by Hirokazu Tanaka**	Ascending Descending Static / flat Wavey Arch	Smooth Angular Jumpy	Steps Skips Leap
Super Mario Brothers **Theme by Koji Kondo**	Ascending Descending Static / flat Wavey Arch	Smooth Angular Jumpy	Steps Skips Leap
Final Fantasy **Theme by Nobuo Uematsu**	Ascending Descending Static / flat Wavey Arch	Smooth Angular Jumpy	Steps Skips Leap

LEARNING ACTIVITY 2:
Drawing Melodies

Excerpts from the MSO Schools Concert program:

	Draw the melodic contour		
2nd phrase of the strings theme from Beethoven's ***7th Symphony Movt II*** (14'10")	Ascending Descending Static / flat Wavey Arch	Smooth Angular Jumpy	Steps Skips Leap
Opening from Beethoven's ***5th Symphony Movt I*** (0'06")	Ascending Descending Static / flat Wavey Arch	Smooth Angular Jumpy	Steps Skips Leap
The Legend of Zelda Main Theme by Koji Kondo (25'32")	Ascending Descending Static / flat Wavey Arch	Smooth Angular Jumpy	Steps Skips Leap
Opening theme from the ***Coriolan Overture, Op. 62*** by Beethoven (0'29")	Ascending Descending Static / flat Wavey Arch	Smooth Angular Jumpy	Steps Skips Leap

ADDITIONAL ACTIVITIES/RESOURCES

Further excerpts from Beethoven 5 & 7:

- Opening from Beethoven's ***5th Symphony Movt II*** (7'28")
- French horn theme from Beethoven's ***5th Symphony Movt III*** (17'46")
- Flute theme from Beethoven's ***5th Symphony Movt IV*** (31'38")
- Opening theme from Beethoven's ***7th Symphony Movt III*** (21'43")

LEARNING ACTIVITY 3:
Two Themes

Who: Year 2 - 6 students
Resources: See appendix for duet 'arrangements'
Time required: 30+ mins

Learning Intention: Students learn to perform a musical theme and recognise this theme in the context of an orchestral performance.

Description: Beethoven is renowned for composing strikingly memorable, ear catching musical themes. This is a key feature of early gaming music too. In this activity you will learn to perform two famous musical themes, the opening of Beethoven's *5th Symphony Movt I* and the main theme from *The Legend of Zelda*.

Once you have learned to play/ sing the opening of Beethoven's 5th, listen to a *recording* and count how many times you hear the famous "Da-da-da-dum" theme (or as they say in the orchestral world "where are my pants").

Having learned to play the main theme from *The Legend of Zelda*. Listen to *this video* which shows the evolution of the musical arrangement as technology in gaming developed. Name 10 differences you hear between the early 8-bit computer generated music and the later symphony orchestra recording.

CURRICULUM LINKS:

Victorian Curriculum F - 10 Version 2.0

- Developing Practices ***VC2AMU6D01***
- Presenting ***VC2AMU6P01***

ADDITIONAL ACTIVITIES/RESOURCES

- Use the accompaniment from the Zelda Theme as the basis for an improvisation. Repeat the original melody first and last with your own improvised melody in the middle. *(Pro tip – try using similar melody notes from the original theme to start with).*
- Take the theme from Beethoven's 5th and use it as a basis for a new composition. Try playing it upside down (inversion), backwards (retrograde) and in different keys (transposition) and see where it takes you... Remember that some repetition is important for making your composition sound cohesive.

CREATIVE ACTIVITY 1:
Create your own soundtrack

Who: Year 2 - 6 students
Resources: Projector, classroom percussion, instruments, objects
Time required: 45+ Mins

Learning Intention: In small groups or as a class, students will develop, document and perform their own accompaniment to footage of a video game.

Description: Imagine you have been asked by Nintendo to create new music and sounds for one of their classic video games.

CURRICULUM LINKS:

Victorian Curriculum F - 10 Version 2.0

- Developing Practices ***VC2AMU6D01***
- Creating ***VC2AMU6C01***
- Presenting ***VC2AMU6P01***

1. First, you need to select an excerpt of gameplay footage you want to tackle.

See below for some options or find your own.

- *Crash Bandicoot*
- *Mario Kart*
- *Sonic the Hedgehog*

2. Next, break into teams and decide who is going to be responsible for each of the required aspects of your games sound accompaniment:

Sound effects
Musical themes
Document the arrangement

TEAM 1

SOUNDS EFFECTS

- Characters in video games can perform different actions such as walking, running, jumping, collecting etc. You need to come up with a different sound for each of their actions.

- Considering the sound quality of the characters actions, experiment with different objects to find sounds that match. Develop a system for representing each of sounds visually. EG: walking is a long curvy line depicting softer steps and running is a pointy line showing heavier, louder steps etc.

MUSICAL THEMES

- A great musical theme usually has a simple rhythm. Keeping the beat in your feet, improvise different rhythms with clapping to make two (or more) short and simple rhythmic ideas.

- Notate the rhythms you have come up in some form so that you can remember them later.

CREATIVE ACTIVITY 1:
Create your own soundtrack

— Notate the rhythms you have come up in some form so that you can remember them later.

— Choose a group of pitches that work together and you like the sound of. Start with just three or the pentatonic scale and use the rhythmic ideas you came up with to experiment with creating simple melodic ideas. Using mostly steps or skips and an occasional larger leap tends to work well. Add more notes to become more musically adventurous.

— Add note names or solfege to your rhythm ideas to create an A theme and a B theme for your game's soundtrack.

— *Tip – using sequence where the same melodic theme is repeated on a different starting note can be effective.*

— Try having one theme in a major key and one theme in a minor key to make things really interesting.

— Finally, time the length of each of the themes.

ARRANGEMENT

— Now it's time to work out when each of these elements, the sound effects and the music will be played by creating a 'graphic musical score'

— On a landscape piece of paper (A3 ideally) rule a line across the middle page and mark increments of 5 seconds along the horizontal line. The musicians will follow this 'time code' to make sure their sounds line up with the video.

— Above the line, create 'hit points' by watching the video of the gameplay and draw the symbol representing the sound effect of the characters action when it happens.

— Underneath the line, use the timings of the musical themes to show when theme A will be played and when theme B will be played and by which instrument/s.

— Consider the best form for creating a sense of motion and interest in the music (EG: A-A-B).

— Tip – early video games weren't able to vary the instrumentation but improvements in technology mean that games being produced since the 2000's have a much wider range of instruments and soundtracks – in your arrangement, consider adding more instruments and getting louder at times and fewer at other times build the sense of drama in your gameplay video.

CREATIVE ACTIVITY 1:
Create your own soundtrack

REHEARSAL AND PERFORMANCE

— Having mapped out your arrangement, practice along with the video trying to have the sounds match the actions on the screen perfectly with the music building a sense of drama.

— You may find you need to rehearse each section separately, then piece it together before trying to put it with the video.

— Finally, perform your soundtrack with the video projected on a big screen for an audience to enjoy.

REFLECTION QUESTIONS

1. ***What was the most enjoyable part of developing your own sound accompaniment to the game?***
2. ***What took longer than you expected?***
3. ***What advice would you give to someone trying to do this for the first time?***

ADDITIONAL ACTIVITIES/RESOURCES

Try using the same elements you have developed to improvise the accompaniment to another section of gameplay footage from the same or a similar game.

CREATIVE ACTIVITY 2:
Imagine your own video game character and leitmotif

Who: Year 2 - 6 students
Resources: General art stationary (pencils, paper, texter etc.)
Time required: 20+ Mins

Learning Intention: Design a character for a new video game and describe the sound of their theme music using appropriate vocabulary.

CURRICULUM LINKS:

Victorian Curriculum F - 10 Version 2.0

- Exploring ***VC2AMU4E01***

Description:

- Watch this helpful video explaining what a *leitmotif* is.
- Next, consider the type of game you want your character to exist in. Is it a first person adventure game, a puzzle game, a driving game?
- What is the premise for the game – what will your character be doing?
    - A superhero battling a villain
    - A chef in a sushi restaurant
    - A lost dog trying to find its way home
    - A nervous percussionist sight reading Beethoven with the MSO?
    - A brave conductor using their magical powers to save the orchestra from an evil composer?
- Draw a picture of your character and write down 5 or more words to describe them.
- Now, imagine what your character's theme music or leitmotif would sound like and use musical words to describe. Consider the following:
    - MOOD - upbeat and playful or suspenseful and scary?
    - TEMPO - how fast or slow?
    - RHYTHM - lots of running fast notes or long slow sustained sounds?
    - ARTICULATION – Are there heavy and forceful accents or does the music sound light and dainty?
    - DYNAMICS – where does the music get louder/ softer?
    - TONALITY – is it major or minor? What scale or chords are used?
- Share your idea for the game, drawing of your character, and description of their leitmotif / theme music with a friend.

CREATIVE ACTIVITY 2:
Imagine your own video game character and leitmotif

ADDITIONAL ACTIVITIES/RESOURCES

- Try writing lyrics for your character's theme music and notating the rhythm of the words.
- Try composing a leitmotif for your character on an instrument.
    - Using a natural minor scale or even a phrygian mode can give a spooky sound to the music. Major pentatonic scales generally sound more playful and have inbuilt melodicism with a mix of steps and skips.
    - Use sequence where the melody is repeated at a higher or lower pitch of the scale/ mode
    - Try using changes in dynamics and tempo to create more drama for a harder level in your imaginary game.
    - What about creating a multiplayer game, with two characters' theme music working together in a duet or clashing in a battle.
- With your character's theme music created, experiment with adding a bass line or some simple chord accompaniment
- Build upon your work so far using notation software such as *musescore.com*, Dorico or Sibelius
    - Start with notating your melody using a mallet percussion instrument like a marimba, xylophone or glockenspiel (this will help create a classic feel to the sound).
    - Copy and paste the melody to create a repeat of the 'A section'.

      Then either:

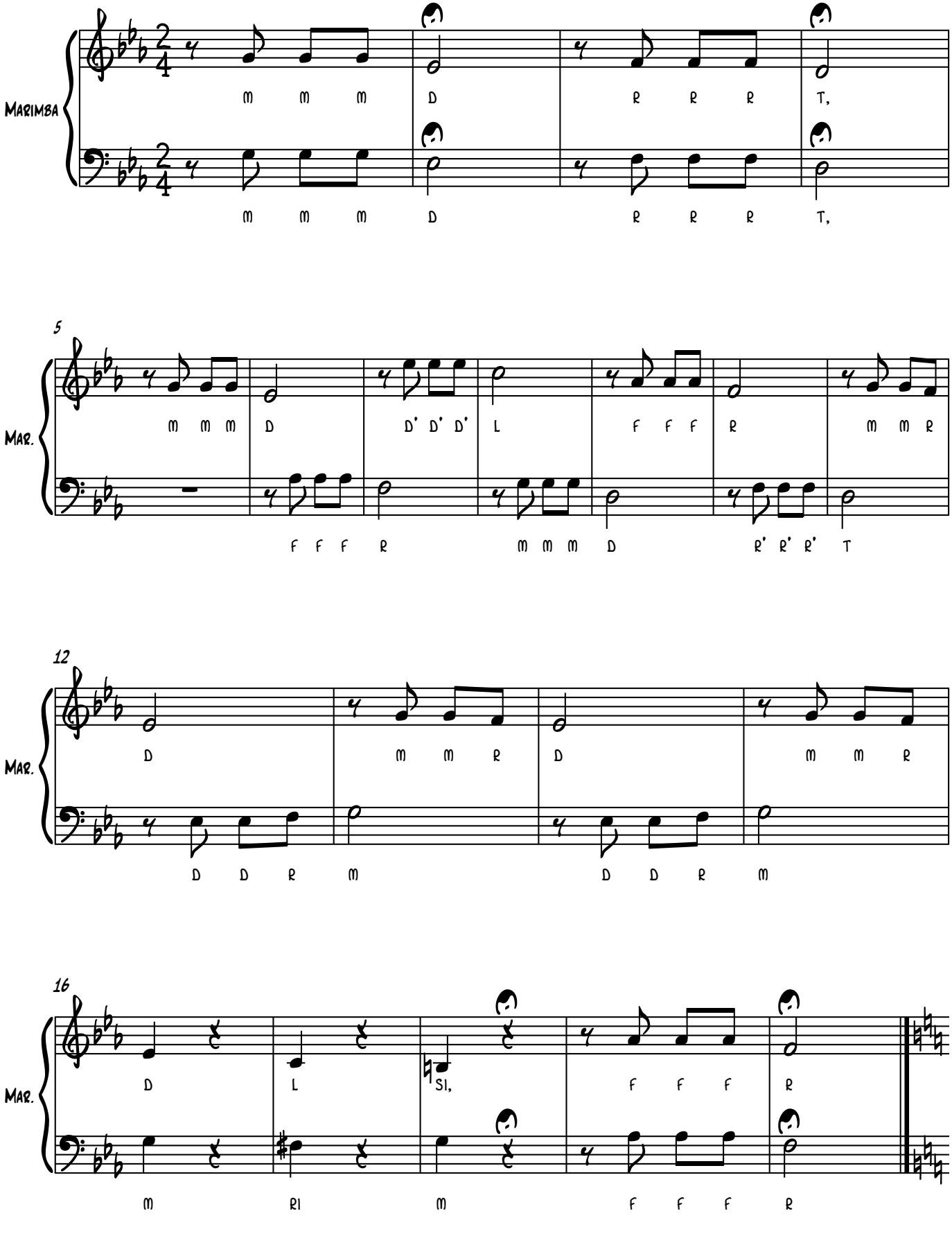
      create a variation by using sequence where the melody is repeated higher or lower by starting on a different note of the scale/ mode (try up a perfect 4th)

      create contrast by composing a 'B section' using a different scale (switching between major and minor can create a sense of drama and narrative in the music)
    - Return to your 'A section' one last time to create an AABA form.
- Once completed, share your work with a friend, teacher or family member.

REFLECTION QUESTIONS

1. *What was the most enjoyable part of creating your game character?*
2. *What parts of the music matched the character the best?*
3. *What took longer than you expected?*
4. *What advice would you give to someone trying to do this for the first time?*

Beethoven's 5th



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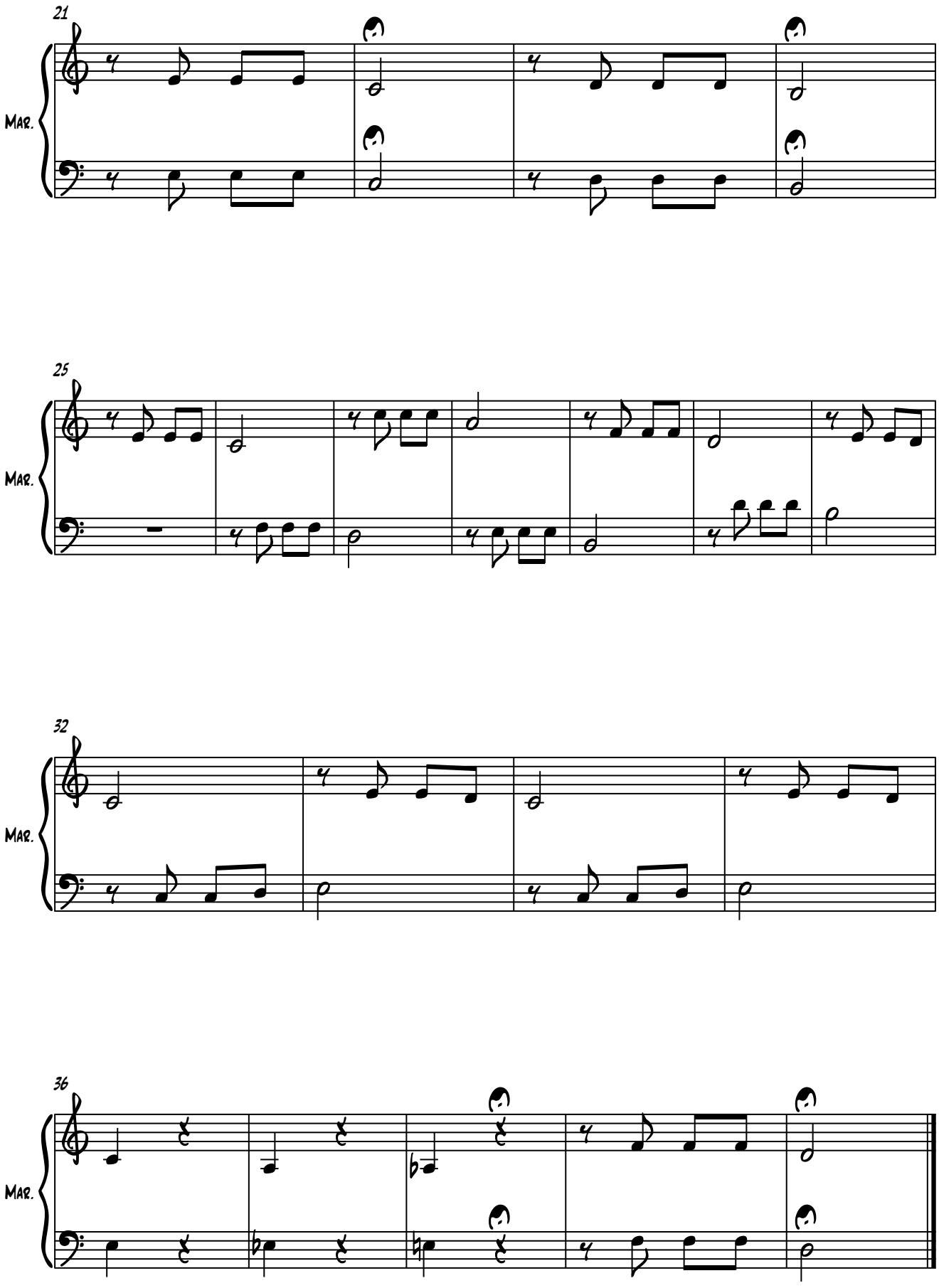
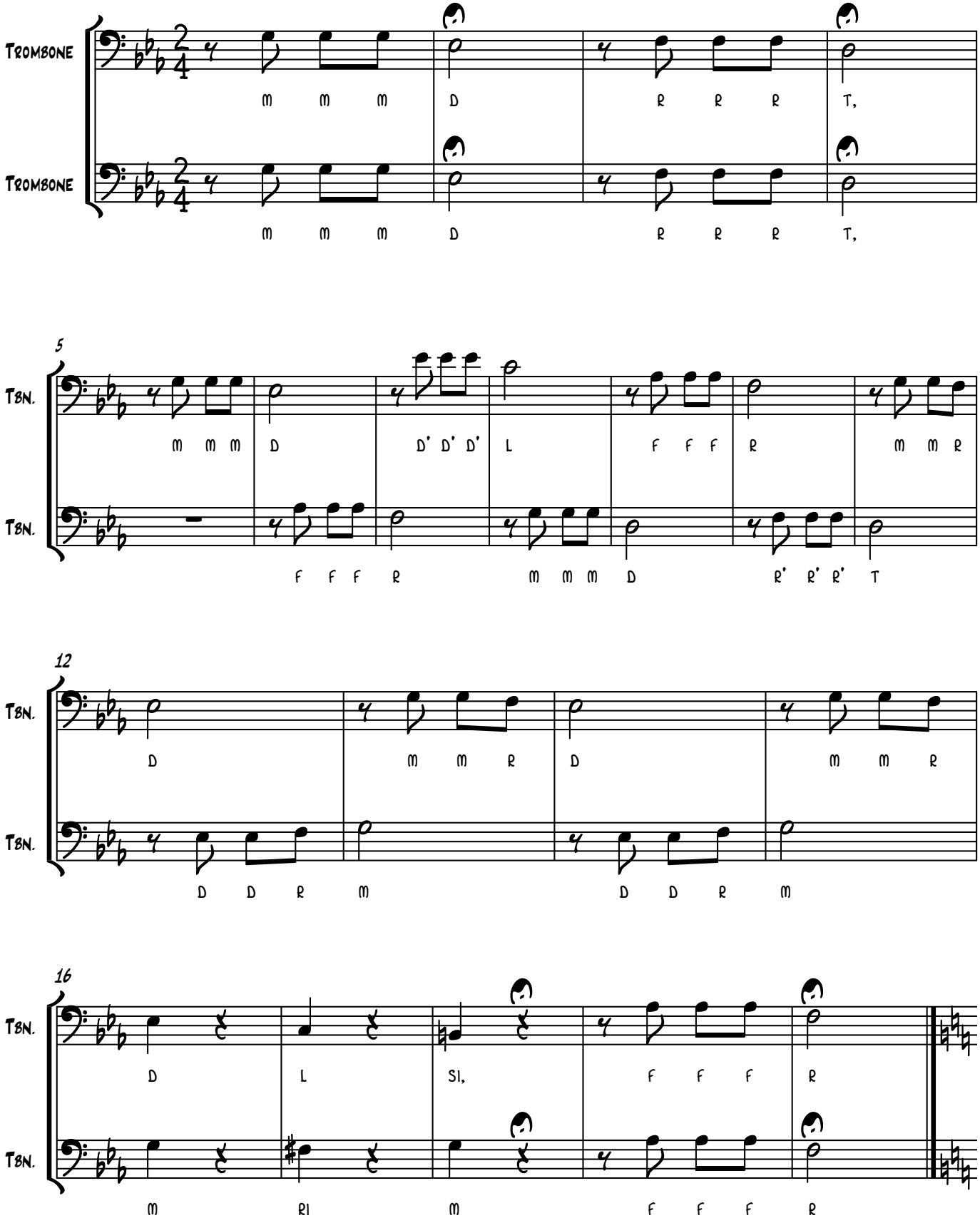
Beethoven 5 in A minor for Classroom Percussion



Beethoven's 5th



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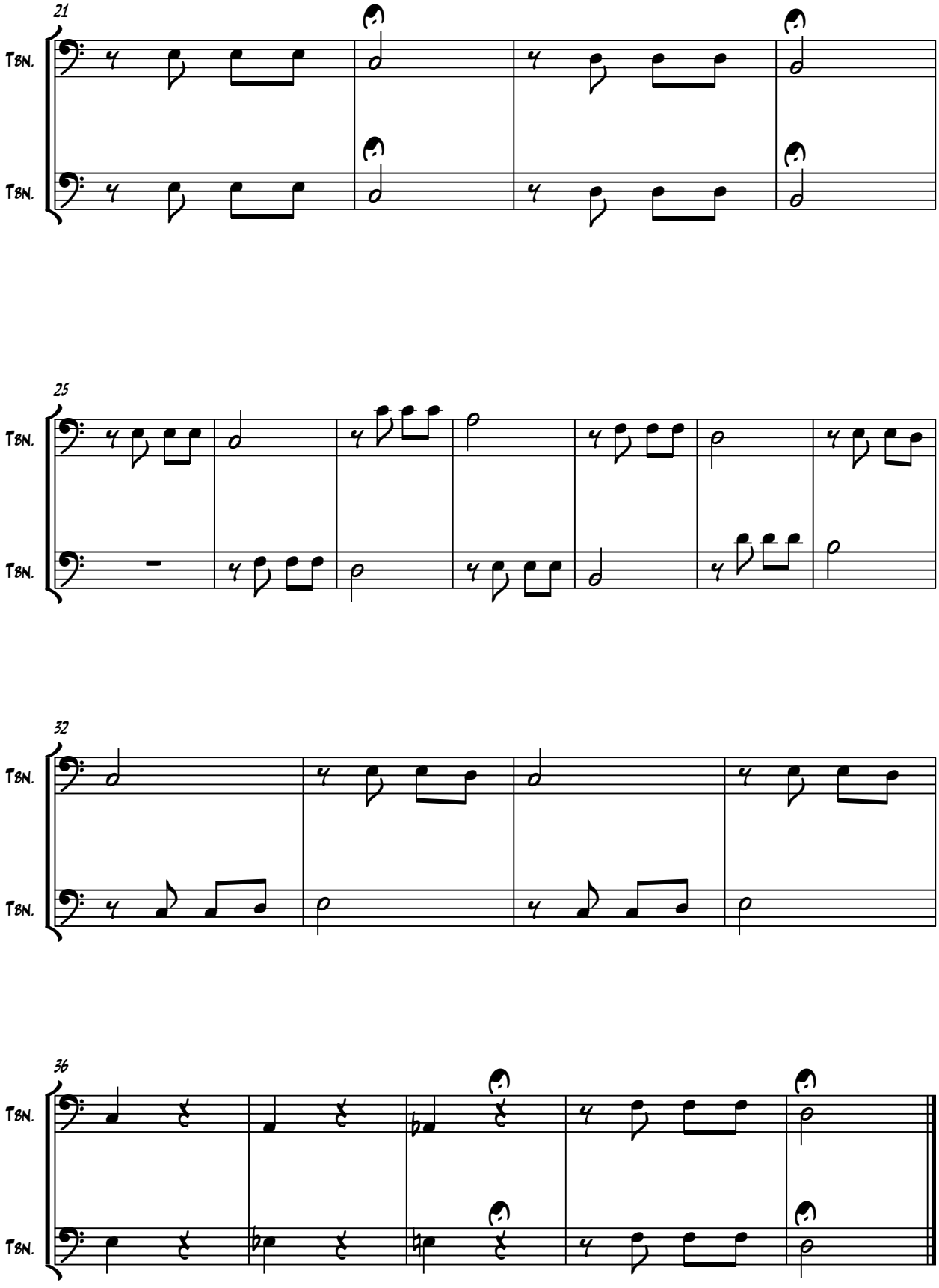
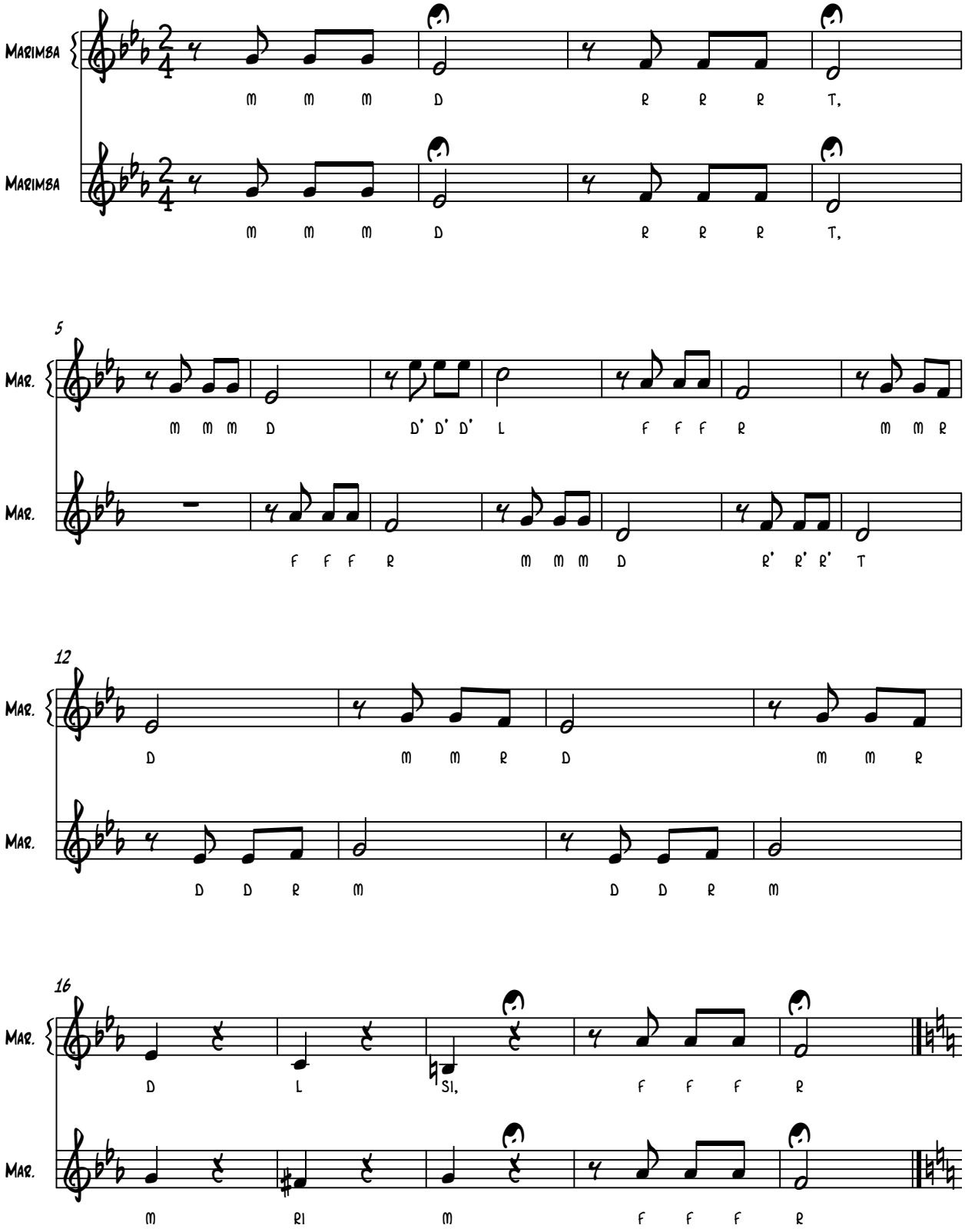


Beethoven's 5th



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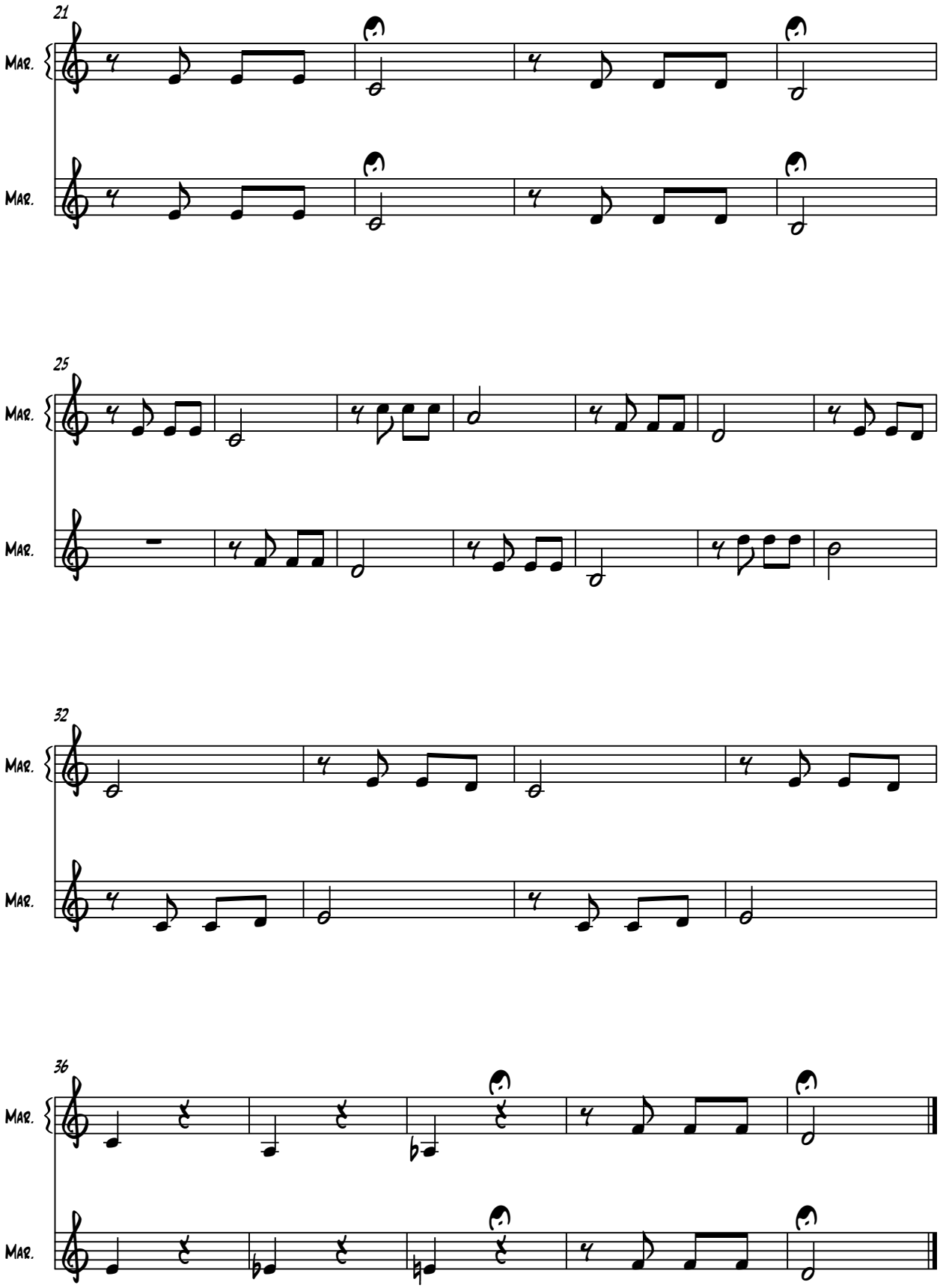
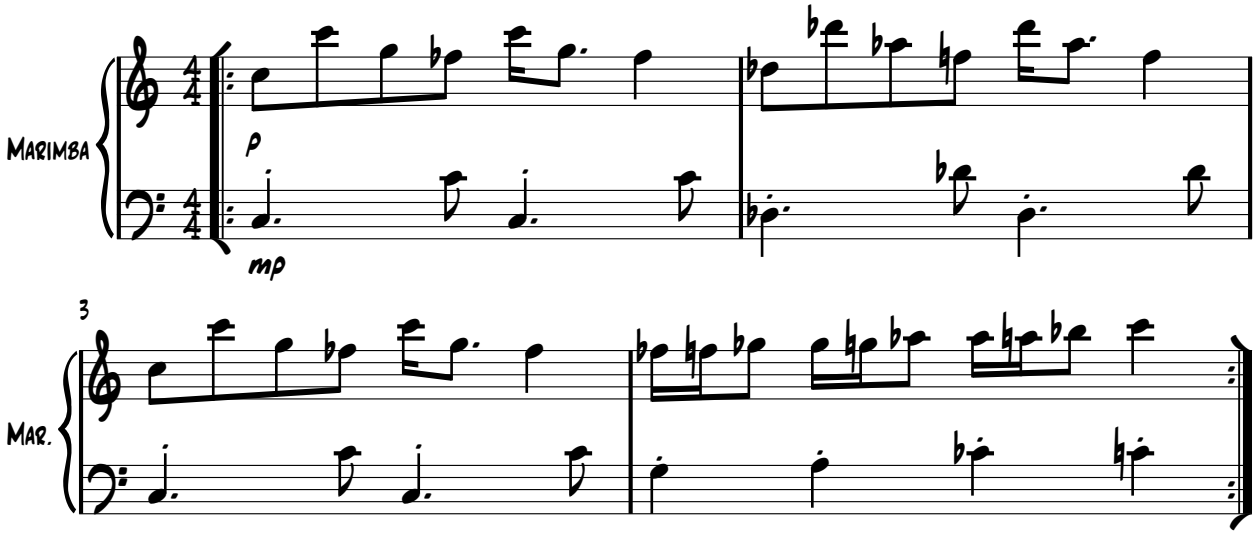


Pac-Man Theme

Toshio Kai (1980)



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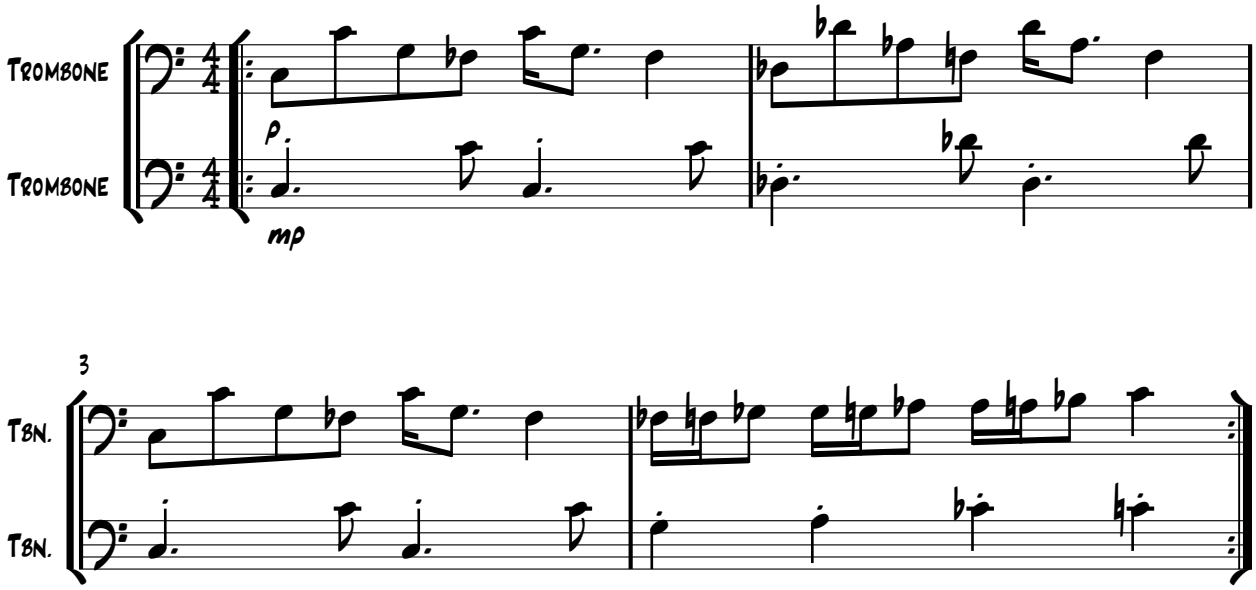

Pac-Man Theme

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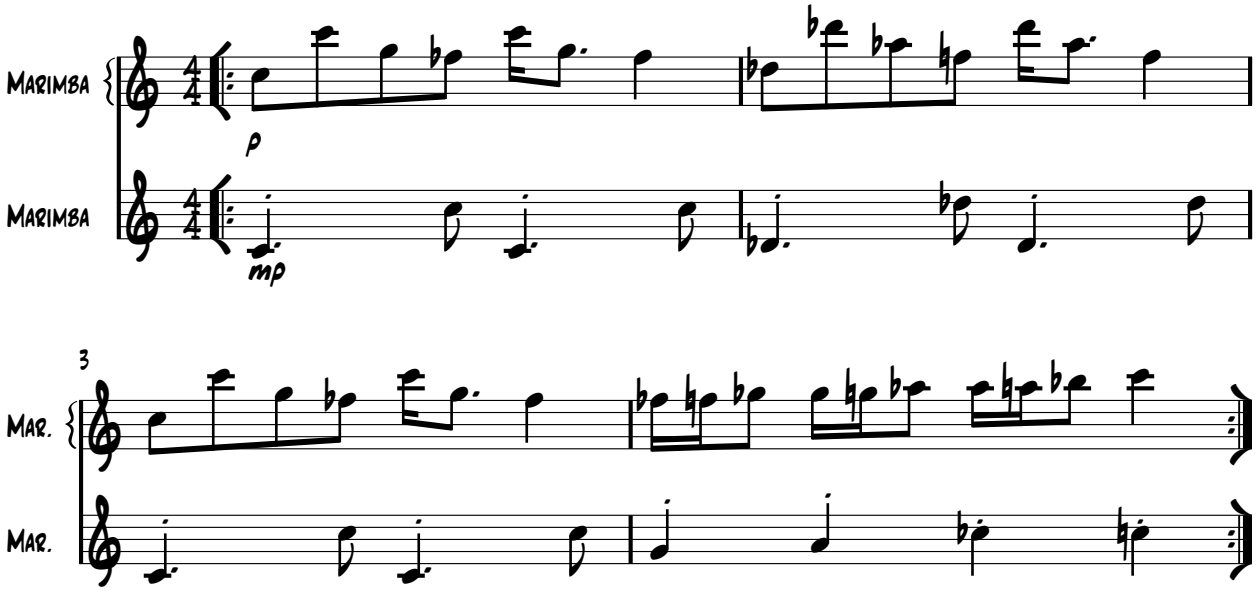
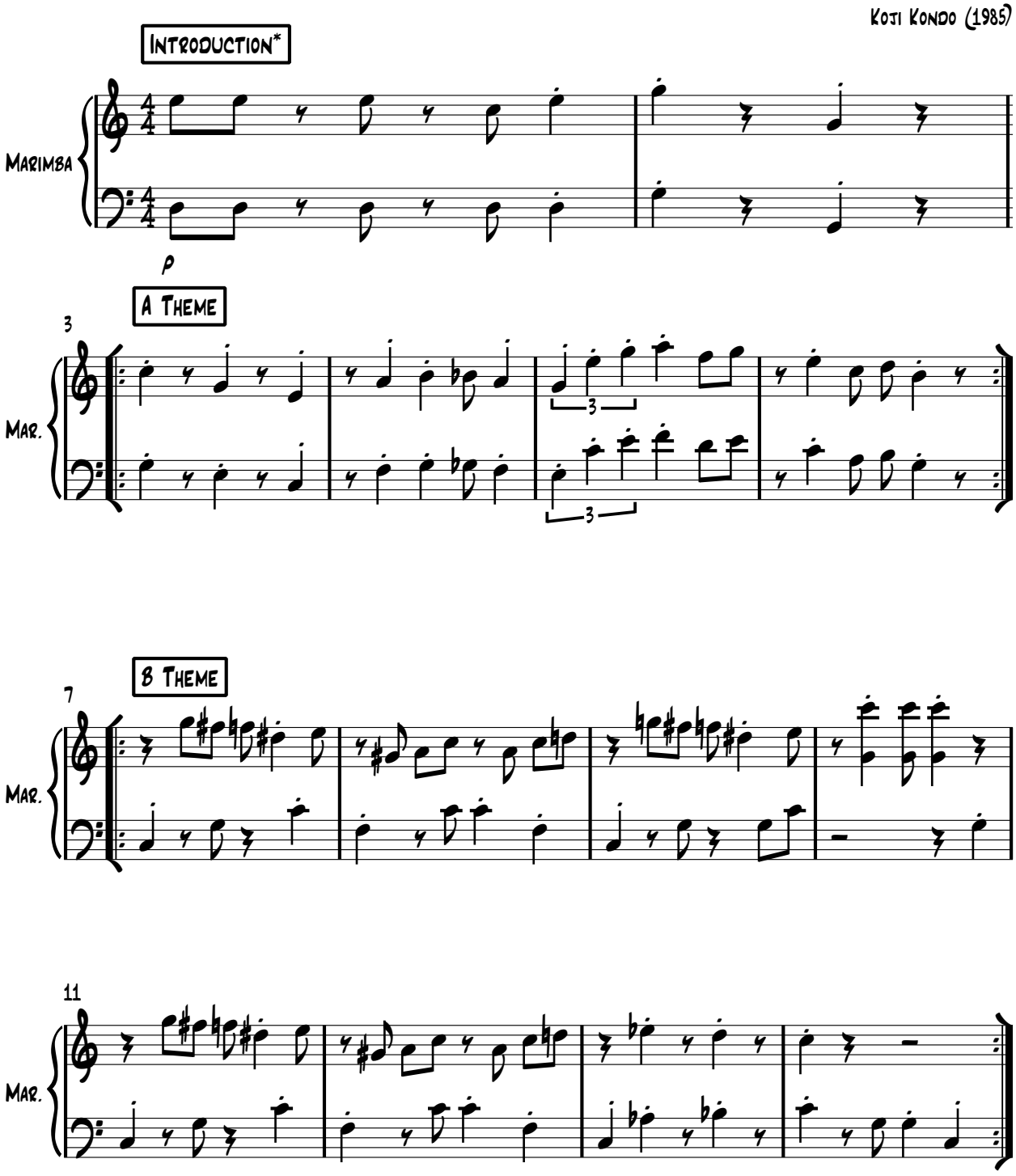


Super Mario Brothers - Ground Theme

Treble and Bass

Koji Kondo (1985)



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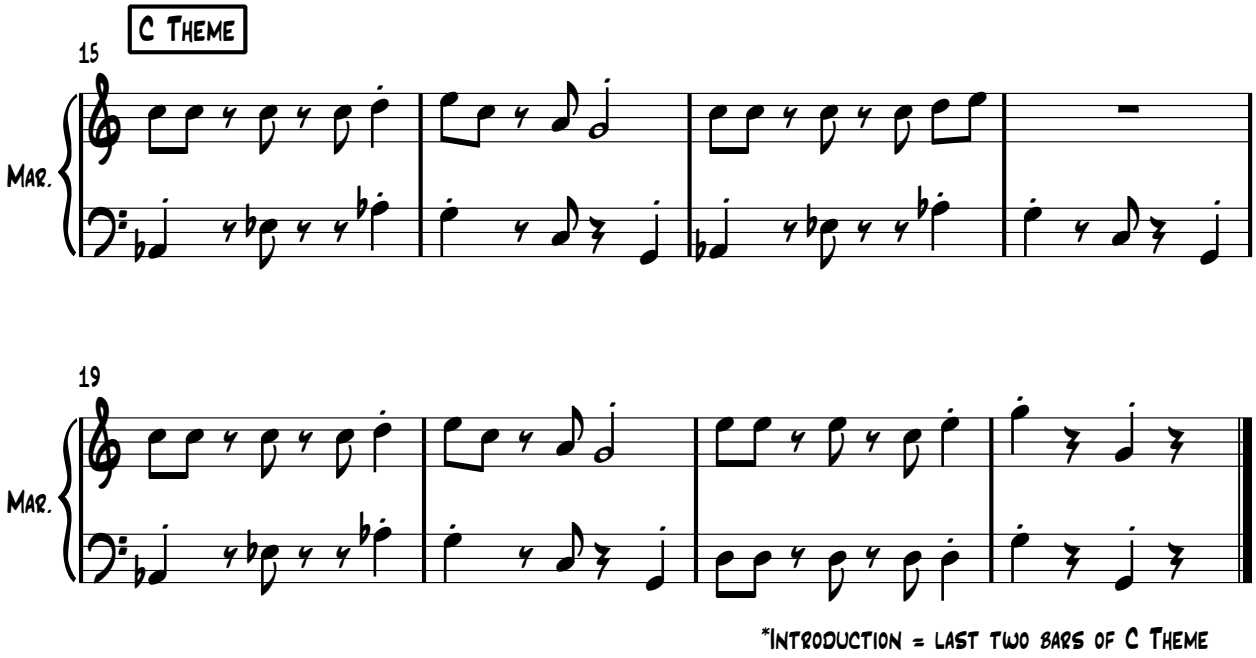
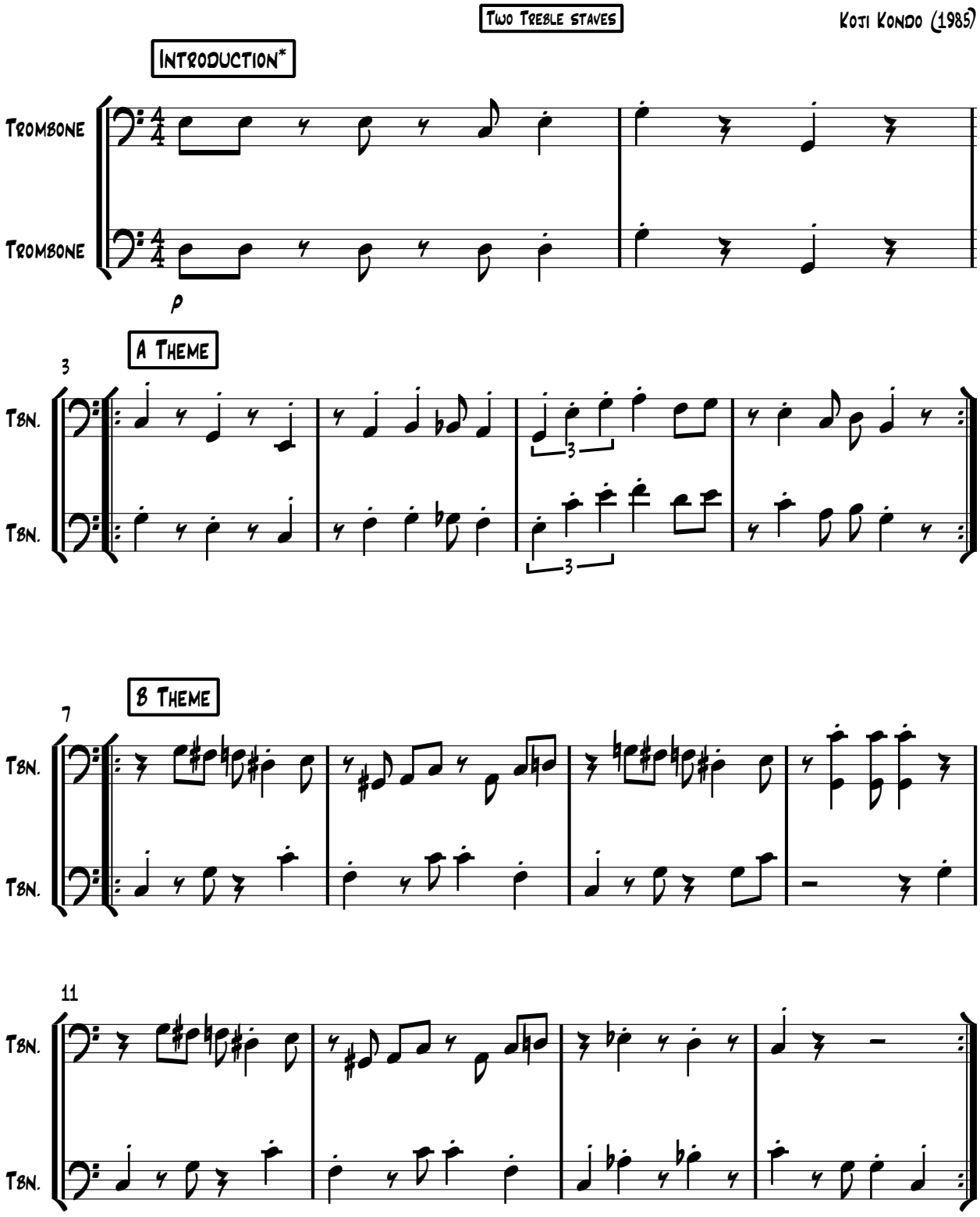


*Introduction = last two bars of C Theme

Super Mario Brothers - Ground Theme



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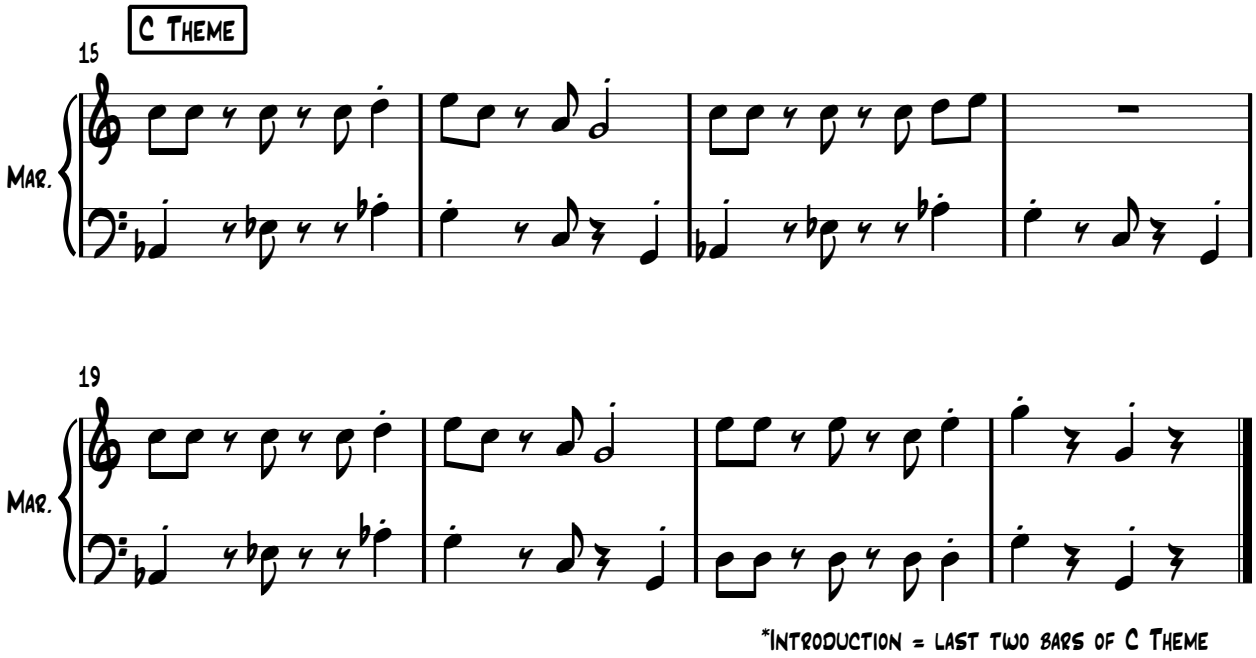
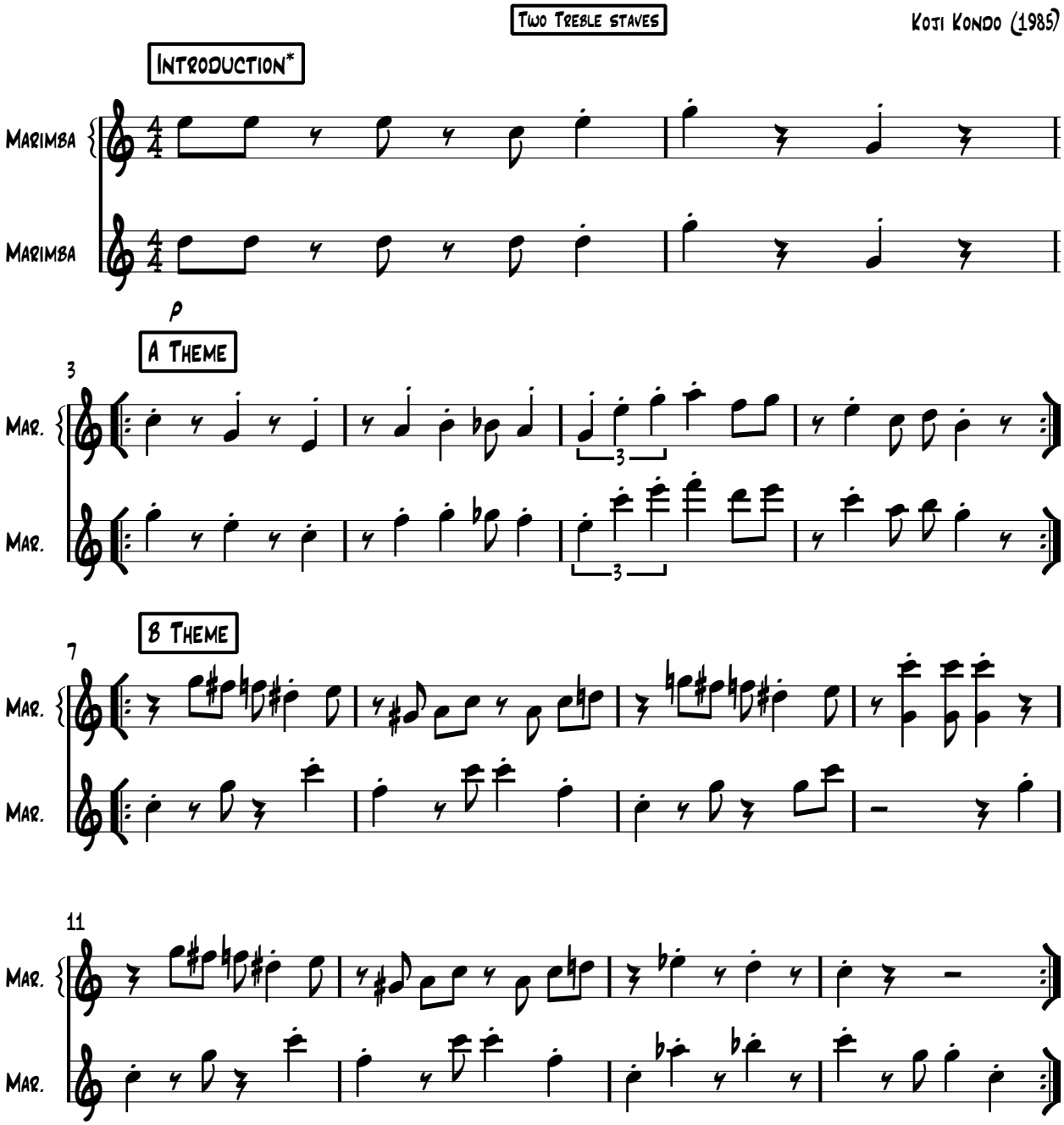


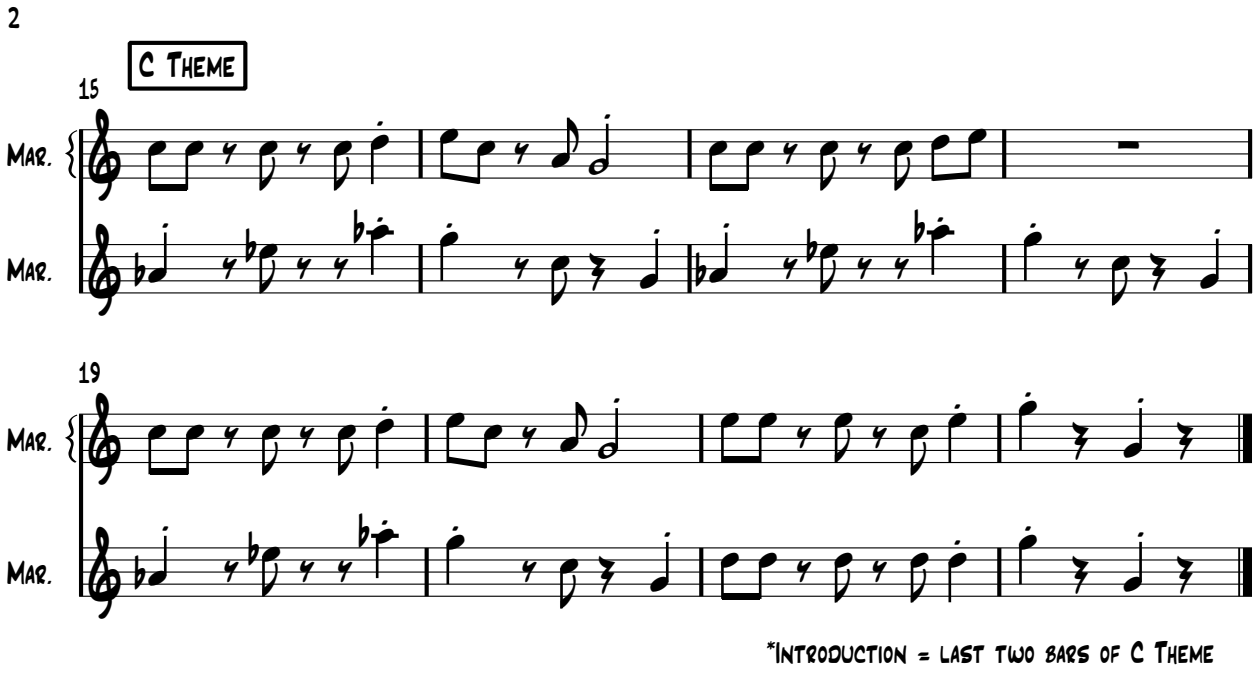
*Introduction = last two bars of C Theme

Super Mario Brothers - Ground Theme

Two Treble staves

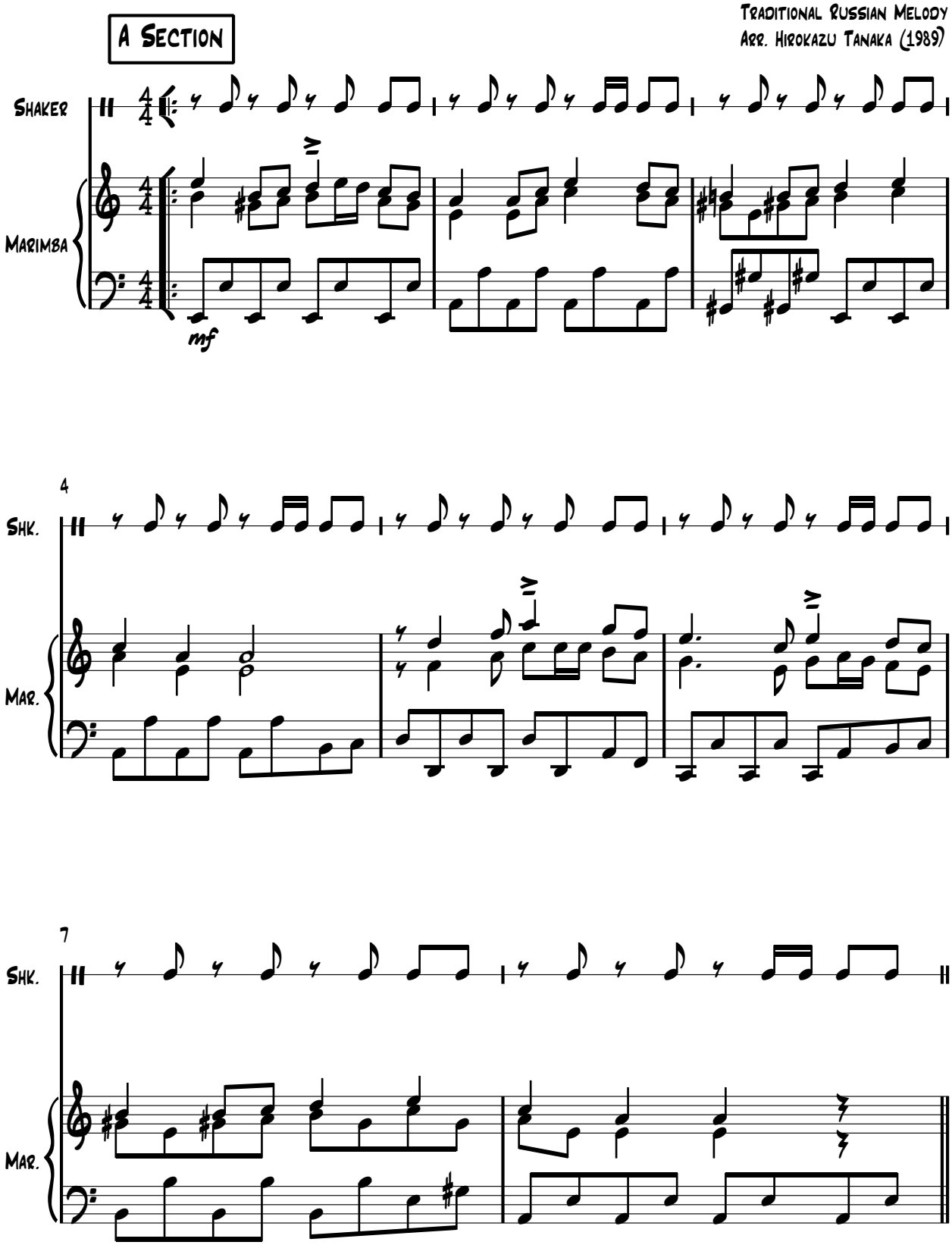
Koji Kondo (1985)

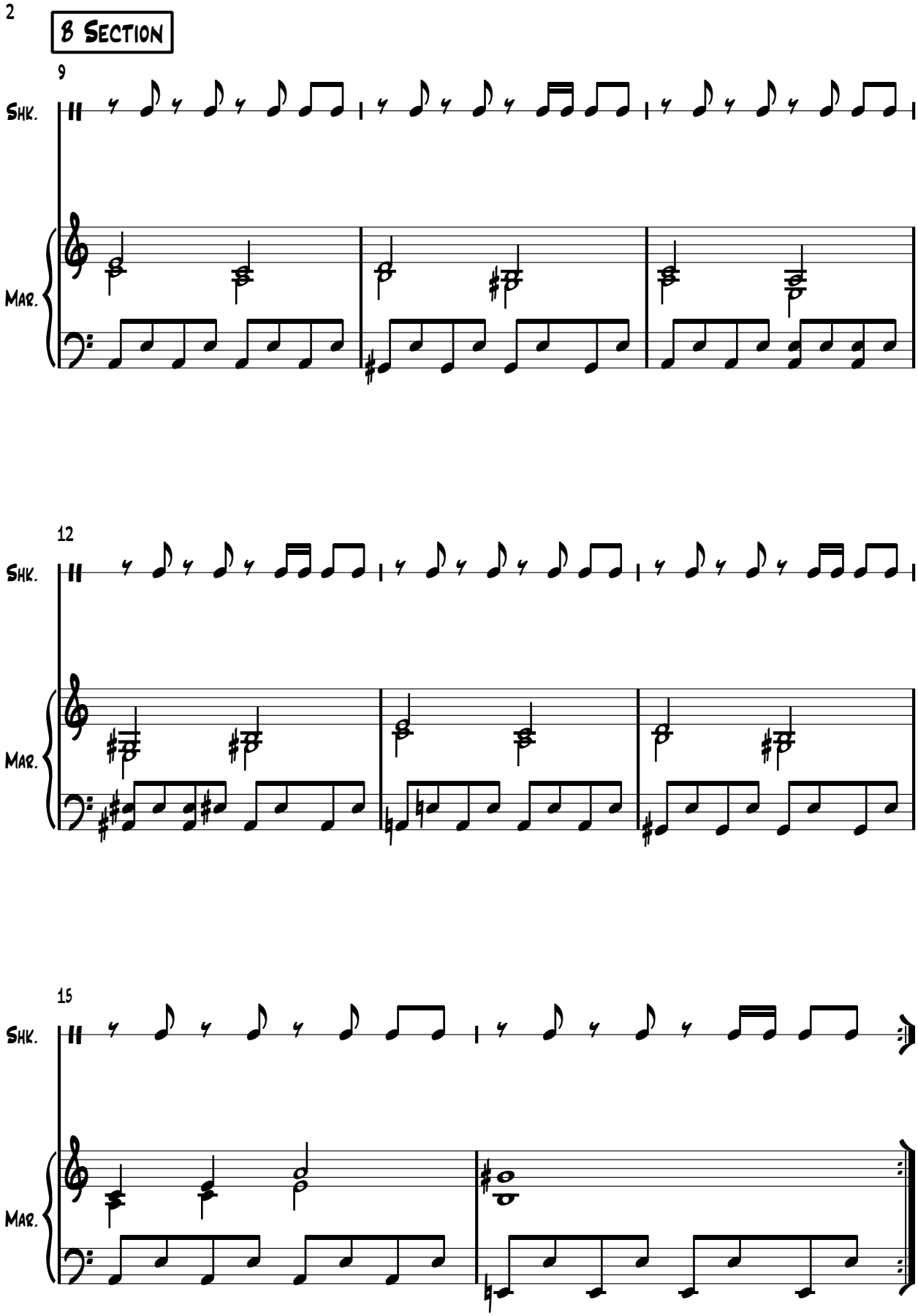



2
C Theme
15
Mar.
Mar.
19
Mar.
Mar.
*Introduction = last two bars of C Theme

Tetris Theme

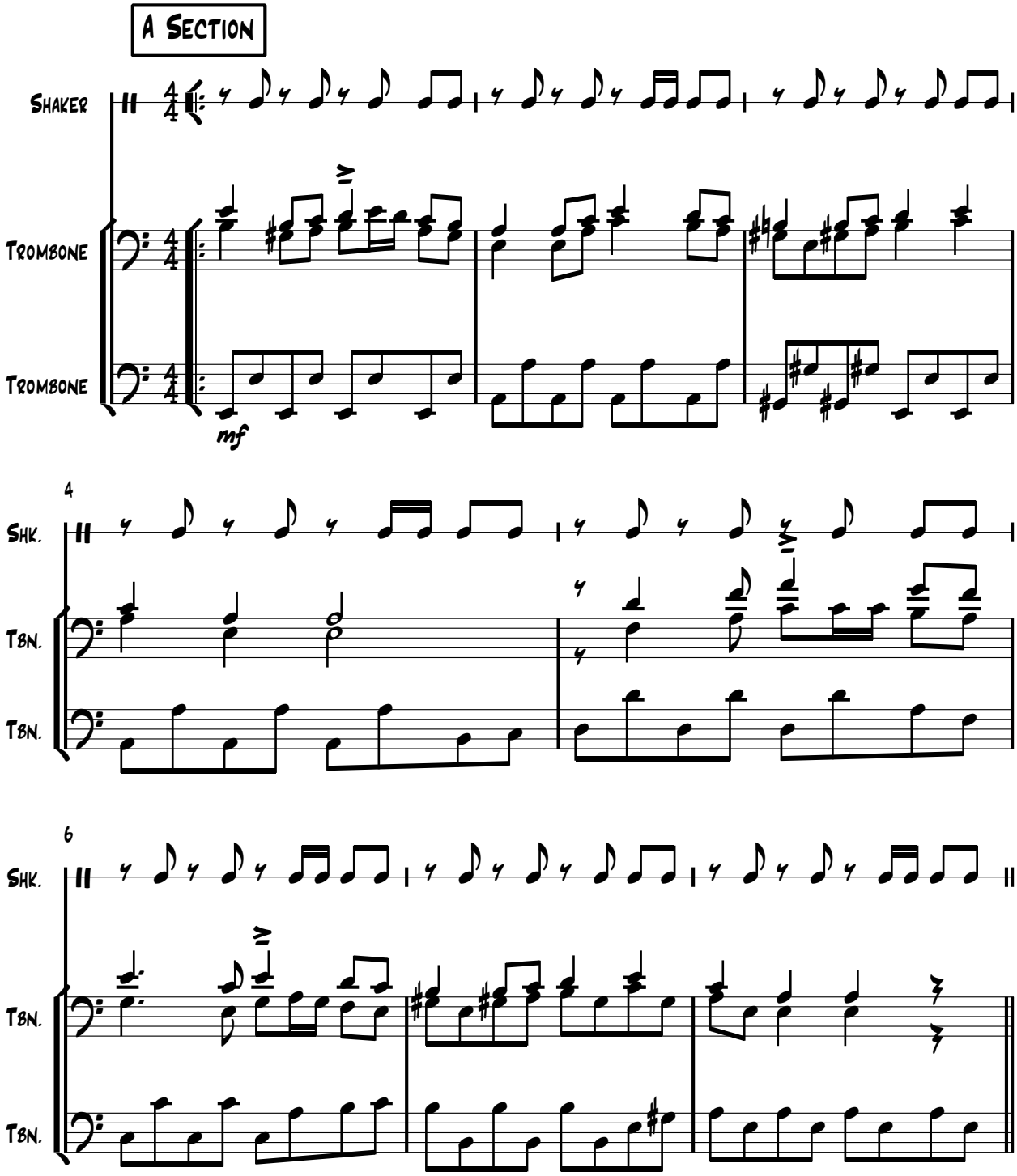
Traditional Russian Melody
Arr. Hirokazu Tanaka (1989)



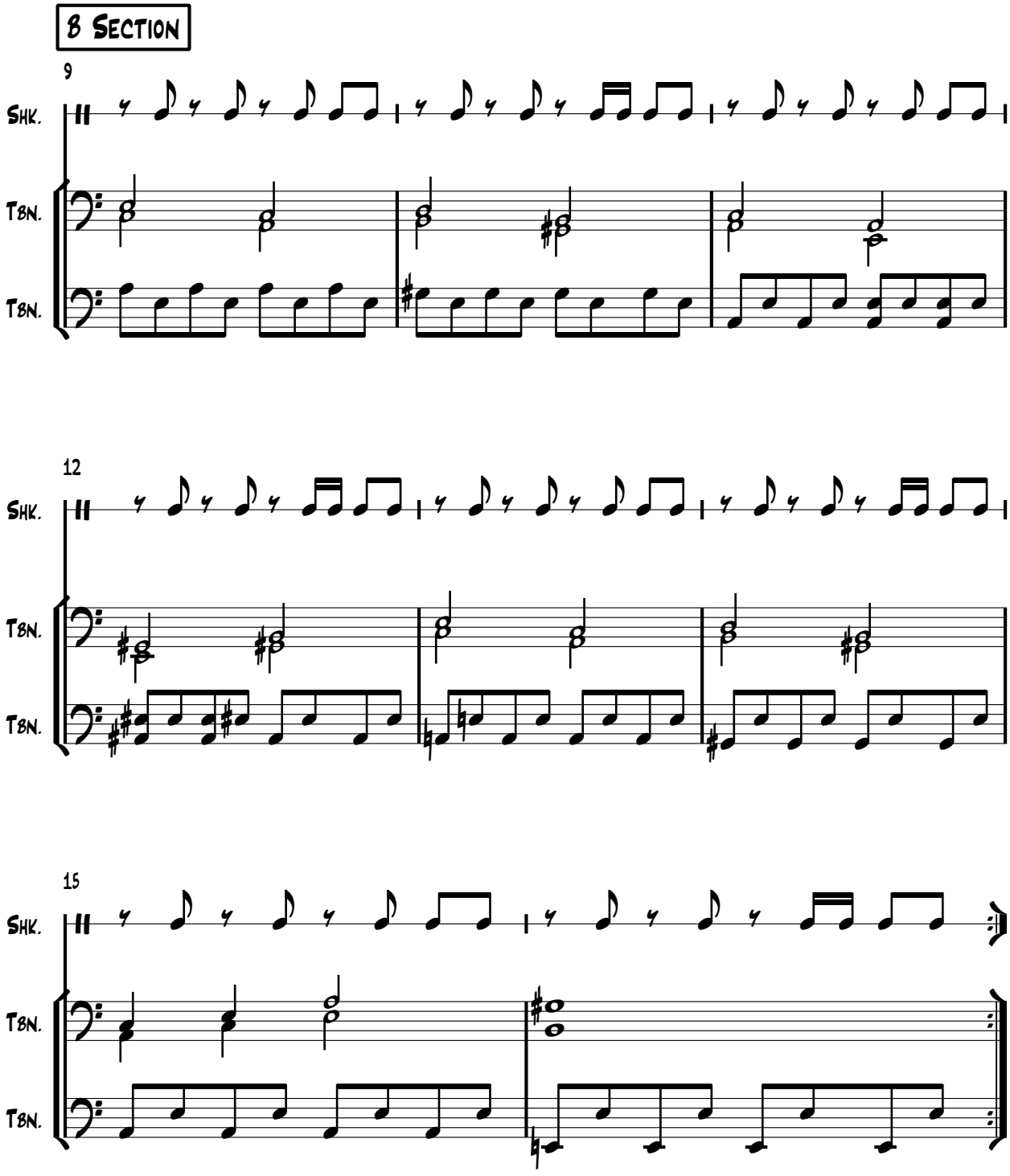

2
B Section
9
Shk.
Mar.
12
Shk.
Mar.
15
Shk.
Mar.

Tetris Theme

Traditional Russian Melody
Arr. Hirokazu Tanaka (1989)

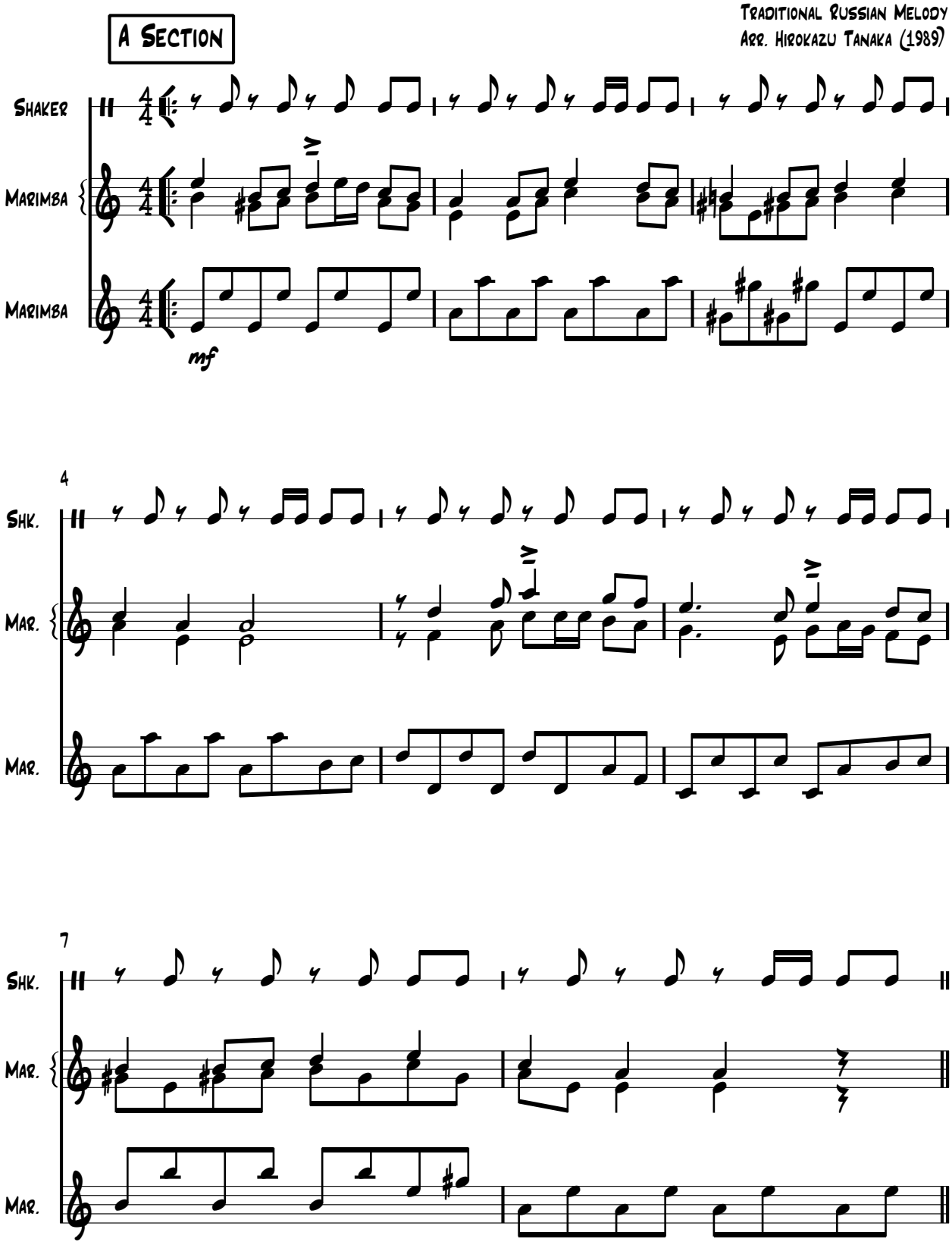


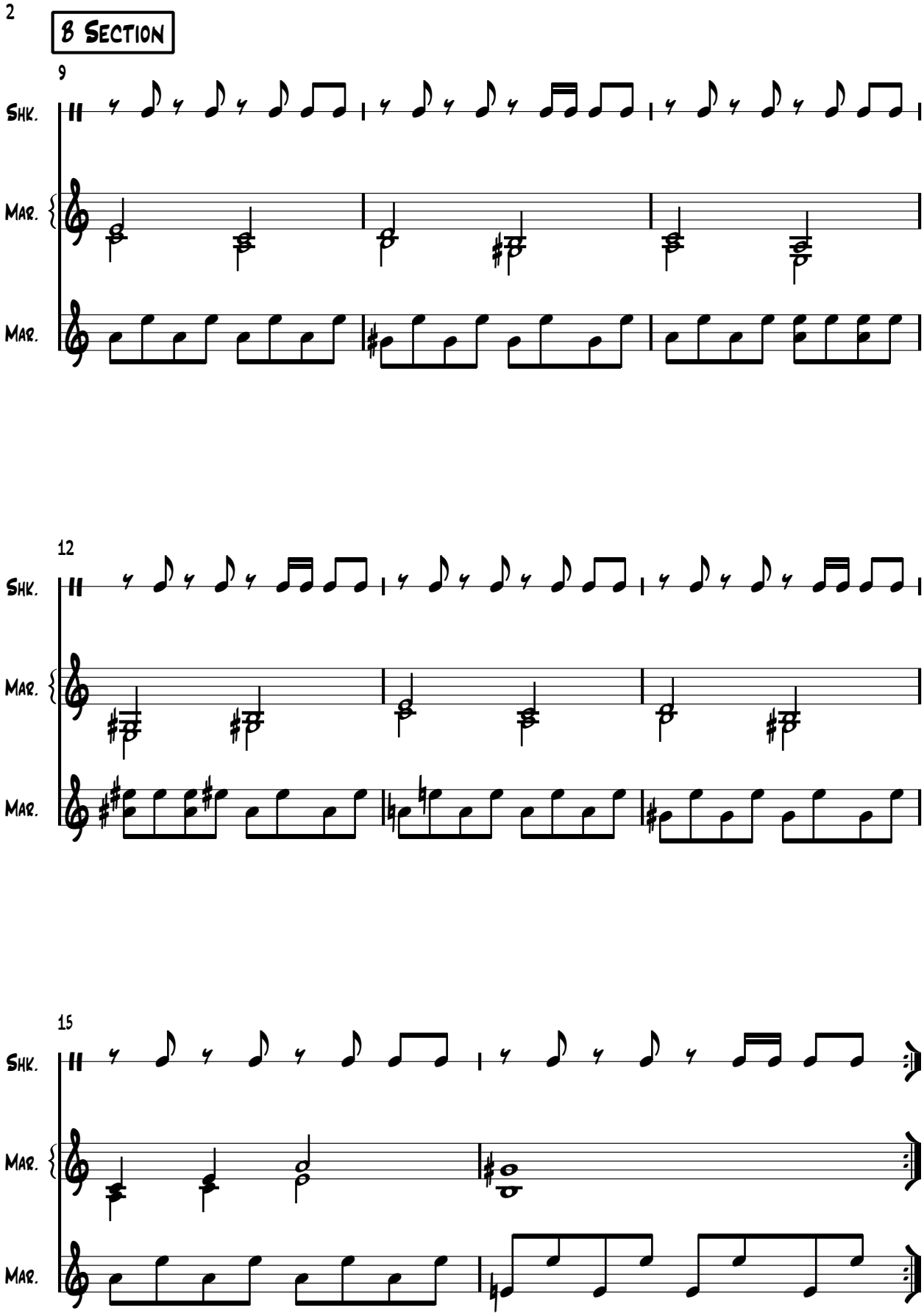
2



Tetris Theme

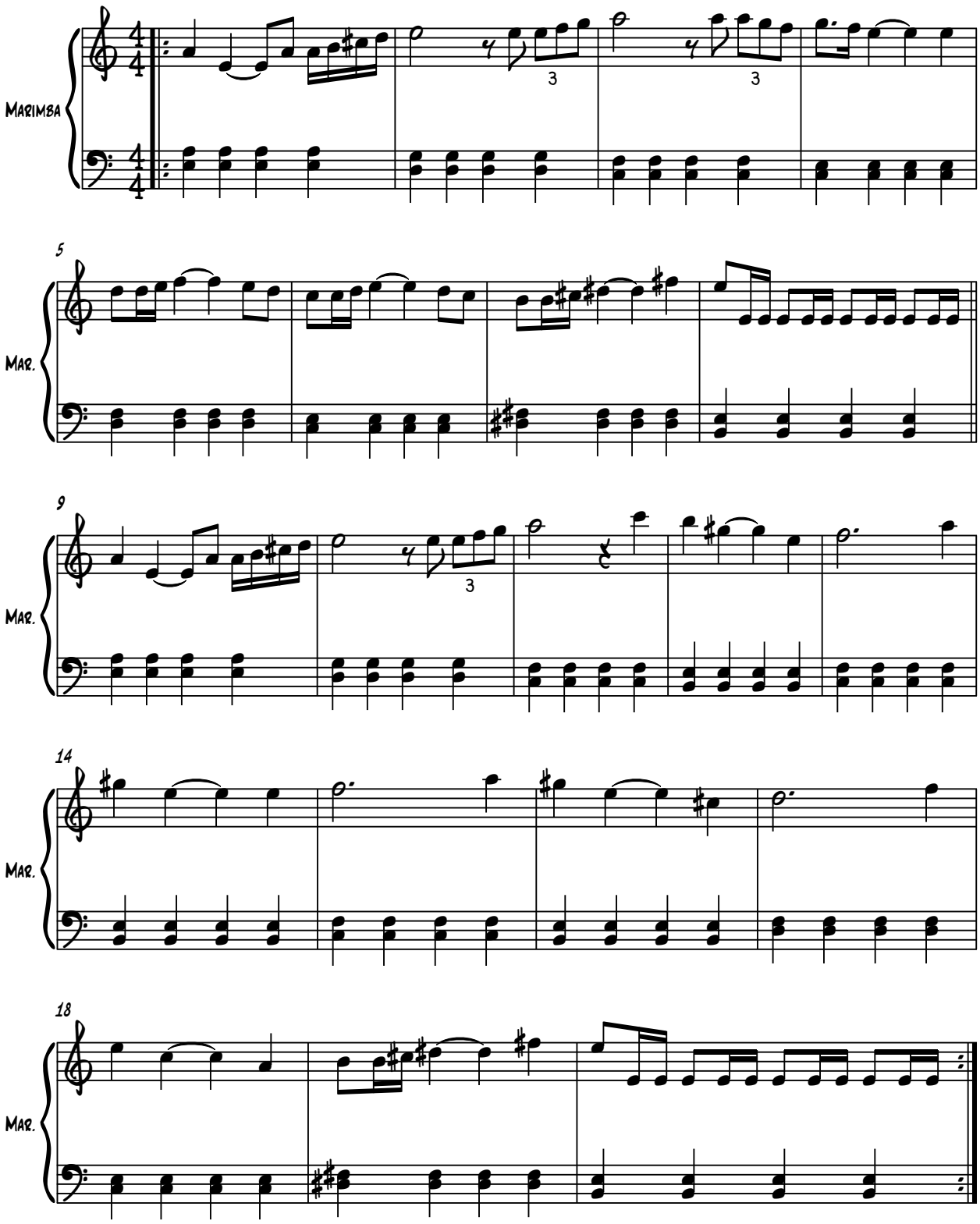
Traditional Russian Melody
Arr. Hirokazu Tanaka (1989)




2
B Section
9
Shk.
Mar.
Mar.
12
Shk.
Mar.
Mar.
15
Shk.
Mar.
Mar.

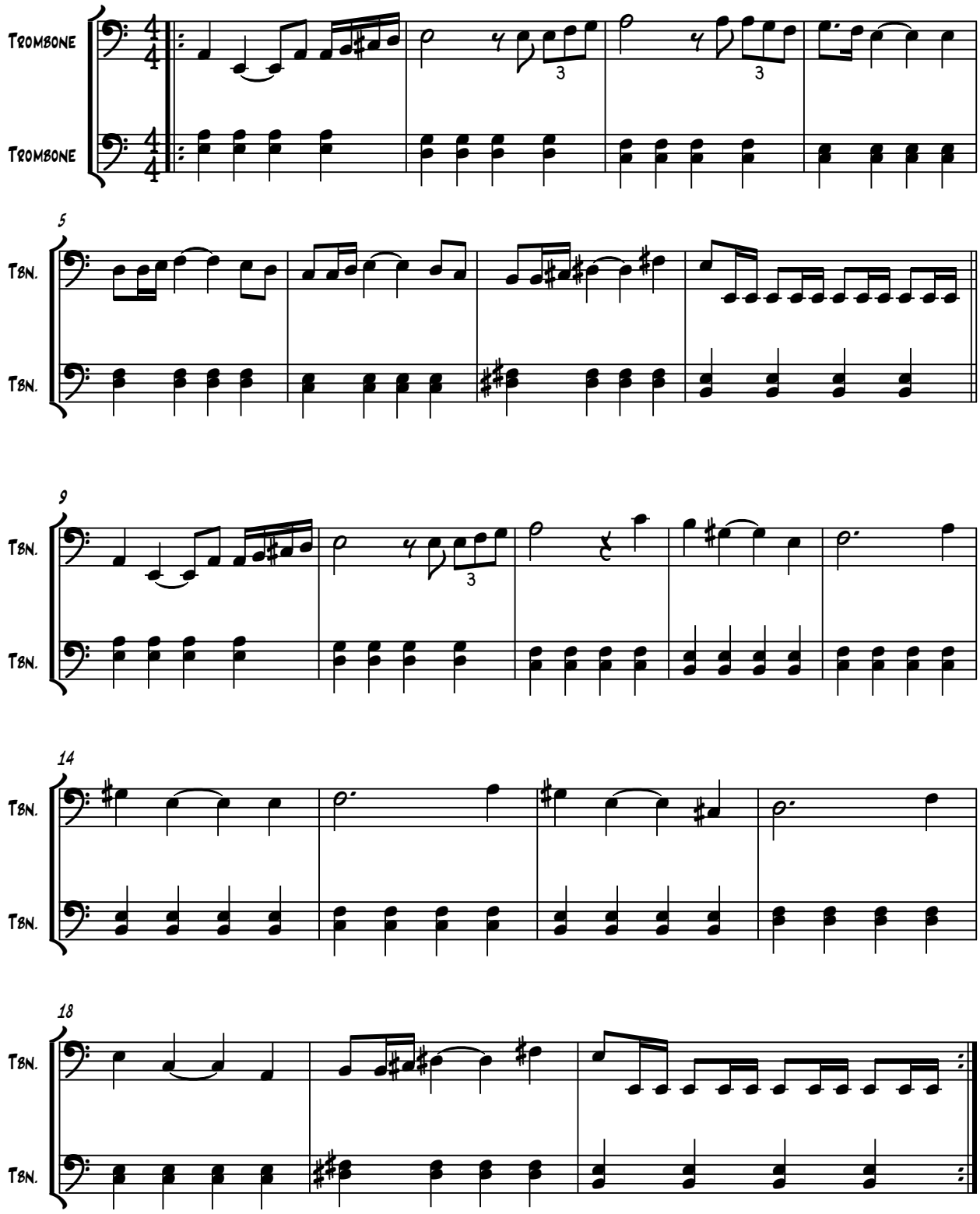
The Legend of Zelda - Main Theme

Koji Kondo



The Legend of Zelda - Main Theme

Koji Kondo



The Legend of Zelda - Main Theme

Koji Kondo