



Student Performance Q&A:

2016 AP[®] Music Theory Free-Response Questions

The following comments on the 2016 free-response questions for AP[®] Music Theory were written by the Chief Reader, Rebecca Jemian of the University of Louisville. They give an overview of each free-response question and of how students performed on the question, including typical student errors. General comments regarding the skills and content that students frequently have the most problems with are included. Some suggestions for improving student performance in these areas are also provided. Teachers are encouraged to attend a College Board workshop to learn strategies for improving student performance in specific areas.

Question 1

What was the intent of this question?

This question assessed students' ability to:

- hear a four-measure major-key melody in compound meter played on a violin;
- notate scale degrees and a descending supertonic triad;
- hear and notate the dotted rhythms in the third and fourth measures of the melody;
- differentiate between stepwise motion and melodic skips; and
- notate pitches correctly in treble clef.

How well did students perform on this question?

The mean score for Question 1, the first melodic dictation example, was 3.6 out of 9 points.

What were common student errors or omissions?

- Forgetting to notate the rhythm of the given starting note
- Missing the opening interval of a descending fourth
- Missing the dotted rhythm in measure 3
- Incorrectly notating the rhythm of the final note
- Writing noteheads without stems

Based on your experience of student responses at the AP[®] Reading, what message would you like to send to teachers that might help them to improve the performance of their students on the exam?

- Practice aural skills daily.
- Teach students to listen to and remember the melody before notating on the page.

- Expose students to a wide variety of melodies in major and minor, various meters, and differing tempi.
- Do more sight singing. Focus on developing scale degree awareness, so that students are not measuring leaps as intervals devoid of a tonal context.
- Don't ignore rhythm: teach students a vocabulary of typical rhythmic patterns in both simple and compound meters.
- Stress proper notation, including correct use of stems, beams, accidentals, dots, etc. Constantly reinforce this until clear notation is a habit. Students will lose points because of illegible notation.
- Discuss question strategy with students; tell them that they can expect straightforward rhythms, a range of approximately one octave, a likely ending on tonic on a strong beat, etc. An important reminder: even if unsure about some of the durations, don't leave noteheads without rhythmic values indicated.

Question 2

What was the intent of this question?

This question assessed students' ability to:

- hear a four-measure minor-key melody in simple meter;
- notate pitches correctly in bass clef;
- hear and notate tonic and dominant scale degrees and the arpeggiated tonic chord;
- hear and notate the dotted rhythms in the first and second measures of the melody;
- hear and notate an idiomatic melodic cadence; and
- differentiate between conjunct and disjunct motion.

How well did students perform on this question?

The mean score for Question 2, the second melodic dictation example, was 2.9 out of 9 points.

What were common student errors or omissions?

- Forgetting to notate the rhythm of the given starting note
- Incorrectly notating the leap from C up to G (scale degrees 1 to 5) in measure 1
- Not notating the accidental to raise the seventh scale degree to the leading tone in measures 1 and 4
- Missing the rhythm of four eighth notes in measure 2
- Having trouble with the third measure, despite being able to notate the opening two measures and the final two to four beats correctly
- Writing noteheads without stems

Based on your experience of student responses at the AP[®] Reading, what message would you like to send to teachers that might help them to improve the performance of their students on the exam?

- Teach students to listen to and remember the melody before notating on the page.
- Expose students to a wide variety of melodies in major and minor, various meters, and differing tempi.
- Do more sight singing. Focus on developing scale degree awareness, so that students are not measuring leaps as intervals devoid of a tonal context.
- Don't ignore rhythm: teach students a vocabulary of typical rhythmic patterns in the basic meters.
- Stress proper notation, including correct use of stems, beams, dots, accidentals, etc. Constantly reinforce this until clear notation is a habit. Students may lose points because of illegible notation.

- Discuss question strategy with students; tell them that they can expect straightforward rhythms, a range of approximately one octave, a likely ending on tonic, etc. An important reminder: even if unsure about some of the durations, don't leave noteheads without rhythms indicated.

Question 3

What was the intent of this question?

This question assessed students' ability to:

- hear a four-part progression in a major key and notate the outer voices;
- provide the correct Roman numeral analysis of the chords;
- demonstrate a knowledge of common chord progressions;
- hear, notate, and analyze an authentic cadence;
- hear and notate triads and seventh chords in root position and in inversions; and
- hear and notate intervals of a third and fifth in the bass line.

How well did students perform on this question?

The mean score for Question 3, the first harmonic dictation example, was 12.9 out of 24 points.

What were common student errors or omissions?

- Failing to correctly notate leaps of a third and fifth in the bass line
- Failing to recognize the difference between a triad and a seventh chord
- Failing to recognize the authentic cadence
- Incorrectly adding a secondary dominant to the progression
- Failing to hear harmonies created by the inner voices

Based on your experience of student responses at the AP[®] Reading, what message would you like to send to teachers that might help them to improve the performance of their students on the exam?

- Teach students to identify cadence types and to work backwards from the ends of phrases.
- Encourage students to check that their bass and soprano lines match their Roman numeral analysis.
- Emphasize the distinctive sounds of triads versus seventh chords.
- Practice hearing and notating inverted chords.
- Practice two-part dictation when given a four-part aural prompt.
- Teach common chord progressions and inversions.

Question 4

What was the intent of this question?

This question assessed students' ability to:

- hear a four-part progression in a minor key and notate the outer voices;
- provide the correct Roman numeral analysis of the chords;
- demonstrate a knowledge of common chord progressions;
- hear and notate triads and seventh chords in root position and in inversion;
- hear the chordal seventh in the outer voices;
- hear and properly notate both the leading tone and subtonic scale degrees in the bass;
- hear and properly label the secondary dominant chord;

- hear, notate, and analyze a deceptive progression; and
- hear the cadential six-four chord and provide an appropriate Roman numeral analysis.

How well did students perform on this question?

The mean score for Question 4, the second harmonic dictation example, was 9.2 out of 24 points.

What were common student errors or omissions?

- Not recognizing the chordal sevenths in the dominant chords
- Identifying the V_5^6 chord as a root position vii°
- Notating proper contour in the soprano but placing the pitches a second or third higher or lower
- Omitting the sharp sign in the bass on chord 2
- Omitting the natural sign to cancel the D-sharp in the bass on chord 4
- Writing an A-sharp in the soprano in place of a G-sharp on chord 4
- Identifying the secondary dominant (V_2^4/iv) as some inversion of a secondary leading tone chord ($vii^{\circ 7}/iv$)
- Identifying the cadential six-four chord as a root position V
- Writing the word deceptive at the cadence but writing Roman numerals other than V–VI
- Writing V–VI at the cadence, but writing bass notes that are incompatible with these chords
- Using the wrong case to indicate chord quality, especially IV for iv and vi for VI (although this error was accepted, as indicated in the Scoring Guidelines)
- Misaligning the notes with the blanks provided

Based on your experience of student responses at the AP[®] Reading, what message would you like to send to teachers that might help them to improve the performance of their students on the exam?

- Work consistently on ear-training skills.
- Teach students to hear pitch patterns in relation to tonic rather than as a series of steps, skips, and leaps.
- Teach common cadential chord progressions to help student recover from mistakes in the middle of the progression.
- Emphasize chromatic alterations needed for secondary dominant chords.

Question 5

What was the intent of this question?

This question assessed students' ability to:

- realize a figured bass progression in Common Practice style in four voices;
- employ smooth voice-leading procedures;
- demonstrate an understanding of diatonic harmony, including chord spelling in a four-part texture, voice leading, and doubling;
- analyze chords using Roman numerals;
- spell chords in a minor key, including raising the leading tone in the $vii^{\circ 7}$ and V chords;
- write and resolve a leading tone seventh chord in an inversion;
- notate a Phrygian (iv^6-V) half cadence;
- correctly prepare and resolve the chordal seventh; and
- correctly realize inverted triads and seventh chords utilizing all chord members.

How well did students perform on this question?

The mean score for Question 5, realizing a figured bass, was 15.1 out of 25 points.

What were common student errors or omissions?

- Failing to supply a correct Roman numeral analysis
- Failing to analyze and realize the $\text{vii}^{\circ 4}_3$ correctly, often mistaking it for a V^4_3 , V^4_2 , or some kind of secondary dominant
- Difficulty realizing figures that indicate chromatic alterations, as in chords two and seven
- Identifying the cadence as authentic, rather than deceptive
- Writing incomplete inverted triads and seventh chords
- Writing parallel fifths and octaves
- Writing contrary fifths in chords three to five
- Writing a hidden fifth between the last two chords
- Failing to correctly prepare and resolve the chordal seventh
- Using incorrect spacing
- Writing overlapping voices
- Notating accidentals on the wrong side of the note
- Failing to write smooth counterpoint between the bass and the soprano

Based on your experience of student responses at the AP[®] Reading, what message would you like to send to teachers that might help them to improve the performance of their students on the exam?

- Consult the AP[®] Course Description Guide and other Web resources.
- Coach students on how to avoid over-complicating the required tasks.
- Practice writing clear, unambiguous musical notation by hand.
- Spend more time teaching $\text{vii}^{\circ 7}$ and differentiating it from secondary dominants.
- Clarify the difference between chromatic scale-degree inflections typical for minor (raised 7, Picardy 3rd, etc.) and chromaticism connected with secondary dominant chords.
- Encourage students to think about voice leading before working on vertical realization.
- Teach students to use stepwise motion and to keep the common tone whenever possible. (Think like a singer.)
- Review the meanings of the figures, giving special attention to identification of chordal roots.
- Emphasize that figured bass is not the same thing as inversion symbols.
- Drill chord spelling, and remind students that chord spelling errors result in a 5-point deduction.
- Teach students to properly prepare and resolve chordal sevenths.
- Practice writing $\text{iv}-\text{V}$ progressions in minor keys, especially the Phrygian cadence (iv^6-V).

Question 6

What was the intent of this question?

This question assessed students' ability to:

- write a four-part chord progression from Roman numerals;
- demonstrate an understanding of chord inversions;
- demonstrate command of voice-leading procedures, including repeating a chord with a change of inversion and root progressions by fifth;

- demonstrate knowledge of how to realize embellishing tones that are represented by figures;
- demonstrate knowledge of secondary dominant chords;
- demonstrate an understanding of tendency tones and their resolutions; and
- demonstrate knowledge of how to approach chordal dissonances.

How well did students perform on this question?

The mean score for Question 6, writing in four parts from Roman numerals, was 9.4 out of 18 points.

What were common student errors or omissions?

- Missing the B-natural in the secondary dominant chord
- Writing incorrect accidentals (often writing a sharp rather than a natural, or raising the chordal seventh rather than the secondary leading tone)
- Omitting the 8–7 motion in chord six, or realizing it incorrectly (often apparently misinterpreting 8 and 7 as scale degrees rather than intervals above the bass)
- Using incorrect spacing
- Writing incorrect inversions (most often writing all chords in root position or confusing the figure $\frac{4}{3}$ with $\frac{4}{2}$)
- Writing incomplete inverted chords
- Adding or omitting a chordal seventh
- Not resolving the chordal seventh properly
- Leaping down into the chordal seventh
- Writing parallel octaves and fifths
- Writing direct/hidden octaves and fifths
- Doubling the leading tone
- Not resolving the leading tone in the soprano
- Writing uncharacteristically large leaps

Based on your experience of student responses at the AP[®] Reading, what message would you like to send to teachers that might help them to improve the performance of their students on the exam?

- Encourage students to use smooth voice leading and, especially, to avoid large leaps.
- Encourage students to use contrary motion in the outer voices.
- Encourage students to write the outer voices first and to fill in the inner voices as a pair, after the outer voices have been carefully checked.
- Avoid overemphasis of doubling the root, because this is not always appropriate (especially when chords are inverted).
- Think carefully about the key signature, about whether a chord should need any accidentals, and, if so, which specific accidentals are needed.
- Be careful not to confuse the leading tone (scale-degree seven) with the chordal seventh.
- Clarify that figures represent intervals above the bass (not scale degrees), and that figures connected with a horizontal line therefore represent voice leading for some upper voice.
- Drill inversions and their figures, carefully distinguishing triads from seventh chords. Students should be aware that they will not receive any points for a chord if the inversion is incorrect or if a seventh is added or omitted (i.e., does not match the analysis provided).
- Focus on proper treatment of dissonance, especially the approach to and resolution of the chordal seventh. Students should be aware that the seventh must resolve in the same voice (not just the same register).

- Emphasize the importance of resolving leading tones, particularly in outer voices.
- Consider identifying tendency tones with a special symbol (e.g., circling them or writing arrows from them) to highlight their importance and their resolutions.
- Advise students not to add embellishing tones unless specifically required by the figures.
- Address the strategic use of incomplete chords: often voice leading is substantially improved when the fifth is omitted from a root-position chord.
- Discuss the appropriate use of charts, diagrams, and other memory aids. Writing charts and diagrams often seems unhelpful for this particular question: it takes time; the information is not always relevant to the question; and the layout sometimes seems to cause mistakes because the student confuses the layout of the diagram with the actual music notation.
- Address issues of notation, particularly the proper way to write noteheads and accidentals (including the placement of accidentals on the left side of the notehead rather than the right), and how to portray doubling.
- When discussing the use of accidentals, use the terms "raise" and "lower" rather than "sharp" and "flat" because sometimes a natural (rather than a sharp or flat) is needed.
- Practice writing common cadences so that typical voice-leading combinations become very familiar.
- Students who can't answer the entire question should be encouraged to skip unfamiliar portions and fill in the chords that they know.

Question 7

What was the intent of this question?

This question assessed students' ability to:

- compose a bass line following the rules of eighteenth-century counterpoint;
- write standard cadences;
- harmonize a melody with an appropriate chord progression;
- use conventional harmonic patterns;
- recognize and correctly use a secondary dominant chord;
- avoid creating doubled leading tones; and
- use embellishments correctly in a two-part framework.

How well did students perform on this question?

The mean score for Question 7, harmonizing a melody with bass line and Roman numerals, was 4.4 out of 9 points.

What were common student errors or omissions?

- Ignoring the secondary dominant
- Incorrectly harmonizing or incorrectly resolving the secondary dominant
- Incorrectly resolving and/or failing to resolve the leading tone
- Using metrically inappropriate six-four chords
- Writing consecutive leaps that are non-triadic
- Writing parallel fifths and octaves and direct fifths and octaves, in both the written bass and the bass implied by the Roman numerals
- Writing harmonic perfect fourths and major seconds between the soprano and bass
- Writing harmonic retrogressions

- Ignoring the given melody in the final measure and incorrectly assuming that a cadential six-four is a proper cadence for this melody

Based on your experience of student responses at the AP[®] Reading, what message would you like to send to teachers that might help them to improve the performance of their students on the exam?

- Discourage overuse of six-four chords, except for the cadential six-four chord *if appropriate* at a cadence. Remind students that passing and pedal six-four chords must occur on weak beats.
- Encourage the use of root-position chords at cadences.
- Discourage the use of the root-position vii^o chord.
- Teach students to prepare and resolve chordal sevenths properly.
- Teach students that ii[#] is not the proper notation for a secondary dominant.
- Remind students that unaccented passing tones are the only appropriate embellishment for this exercise and that the given melody will not include accented non-harmonic tones.
- Encourage students to use the first phrase as a guide for consistency throughout the harmonization.

Question S1

What was the intent of this question?

This question assessed students' ability to:

- sight read and sing a melody in major mode;
- sing in simple meter;
- perform common rhythmic patterns;
- perform a dotted rhythm;
- perform conjunct motion;
- sing a melody with a melodic range of a minor ninth;
- perform chordal skips within the tonic and dominant triads;
- sing a two-phrase unit with motion from *sol* to *do*;
- retain a sense of tonic; and
- read in bass clef.

How well did students perform on this question?

The mean score for S1, the first sight-singing question, was 4.9 out of 9 points.

What were common student errors or omissions?

- Failing to hold the last note for its full value
- Singing in the minor mode instead of in major
- Going back to *do*, or continuing to *fa* in segment 2
- Failing to achieve the leap to high *do* in segment 4, for the anacrusis of phrase 2
- Failing to sing *la-fa* correctly in segment 5, and then continuing with the correct contour but incorrect pitches

Based on your experience of student responses at the AP[®] Reading, what message would you like to send to teachers that might help them to improve the performance of their students on the exam?

- Sight sing regularly in class.
- Practice reading and performing in different clefs.

- Encourage students not to hum, but to sing with an initial consonant sound; humming obscures accurate pitch.
- Encourage students to sing strongly so they can be heard.
- Encourage students to sing the tonic triad to establish the key/tonic.
- Encourage students to select a starting pitch that is comfortable for their individual range.
- Encourage students to ghost-finger along, as if playing their instruments, while singing.
- Encourage students to sing using contour — not just rhythm on the tonic pitch — if they struggle greatly with pitch.
- Encourage students to keep going even if they make a mistake.
- Teach students how to regain their place in a melody, such as finding high *do* in segment 4.
- Practice common rhythmic patterns in various meters.
- Emphasize holding notes for their full value.
- Allow students to use a neutral syllable if, by March, they are struggling with solfège or numbers.
- Encourage students to analyze the mode of the melody they are performing.
- Encourage students to sing aloud during the 75-second practice time.
- Encourage students to practice rhythm first during the practice time.
- Let students know that it is acceptable to write on the test during the practice period.
- Let students know that it is acceptable to conduct while they practice and perform, so that they establish a steady tempo.
- Give practice AP[®] Music Theory Exams, including using the sight-singing melodies from previous years that are posted on AP Central.
- Simulate the recording scenario for students.
- AP Music Theory teachers need to work with their AP Coordinators to establish an appropriate testing environment for the sight-singing questions. Students need to be sonically isolated from each other, so that they do not hear each other's practice and performance.
- Prior to the day of the exam, review the recording process with proctors and train them to use the equipment, including how to save MP3 files.

Question S2

What was the intent of this question?

This question assessed students' ability to:

- sight read and sing a melody in minor mode;
- sing in compound meter;
- sing note values at the beat, the division, and the subdivision level;
- perform dotted rhythms;
- recognize melodic and rhythmic patterns;
- recognize and sing a diminished third, from *le* to *fi*, the raised fourth scale degree;
- sing a melody with a vocal range of a diminished seventh, from *ti* to *le*;
- sing skips and stepwise motion in both ascending and descending directions;
- sing leaps within the dominant seventh chord;
- establish and maintain a steady tempo;
- establish and retain a sense of tonic; and
- read treble clef.

How well did students perform on this question?

The mean score for S2, the second sight singing question, was 3.7 out of 9 points.

What were common student errors or omissions?

- Singing in major mode instead of in minor, or mixing the modes
- Failing to hold the last note for its full value
- Performing rhythms incorrectly, especially the dotted rhythms
- Not singing in compound meter, especially in segments 1 and 2
- Transposing the last segment away from the original key
- Singing a *te* instead of *ti* in segment 3
- Singing a *fa* instead of *fi* in segment 6
- Performing an incorrect interval in segment 4
- Reading the wrong clef
- Not maintaining a steady tempo throughout the melody

Based on your experience of student responses at the AP[®] Reading, what message would you like to send to teachers that might help them to improve the performance of their students on the exam?

- Train aural skills daily.
- Start singing early in the year; sing often in major and minor modes, in simple and compound meters, using various clefs and ranges.
- Coach students on where to place a melody in a range of the voice that is both comfortable and executable.
- Teach and use a system of singing, such as solfège, numbers, etc. Emphasize the relationship of scale degrees in the system to tonic.
- Emphasize the difference between major and minor scales and triads.
- Practice singing in all forms of minor, including descending scalar and intervallic patterns.
- Look at a melody as being centered on a tonic triad.
- If you teach a student a vocalization pattern to establish tonic, make sure the student understands the relation to tonality.
- Practice melodies that contain altered tones.
- Encourage students to articulate each note (for example "ta, ta, ta" instead of a slurred response)
- Caution students that singing letter names, scale degree numbers, or solfège syllables without correct pitch and rhythm doesn't earn any points.
- Practice executing standard rhythmic patterns, including dotted rhythms.
- Emphasize rhythmic integrity; the duration of the final note is important.
- Teach students to choose an appropriate tempo for singing. The tempo of this exercise was marked *Moderato*. Although points were not deducted for an incorrect tempo set at the start of the exercise, students tended to fare worse if they chose to perform at a painstakingly slow tempo OR at a very fast tempo.
- Offer strategies for the sight-singing process: use of the practice time; identification of clef, key signature, range, and time signature; identification of tricky spots; recognition of basic rhythmic and melodic patterns.
- Simulate the testing experience prior to the exam. Let students practice with the technology in a setting that replicates where the proctor and equipment will be.
- Encourage students to sing with full voice during the practice and performance portions of the exam.