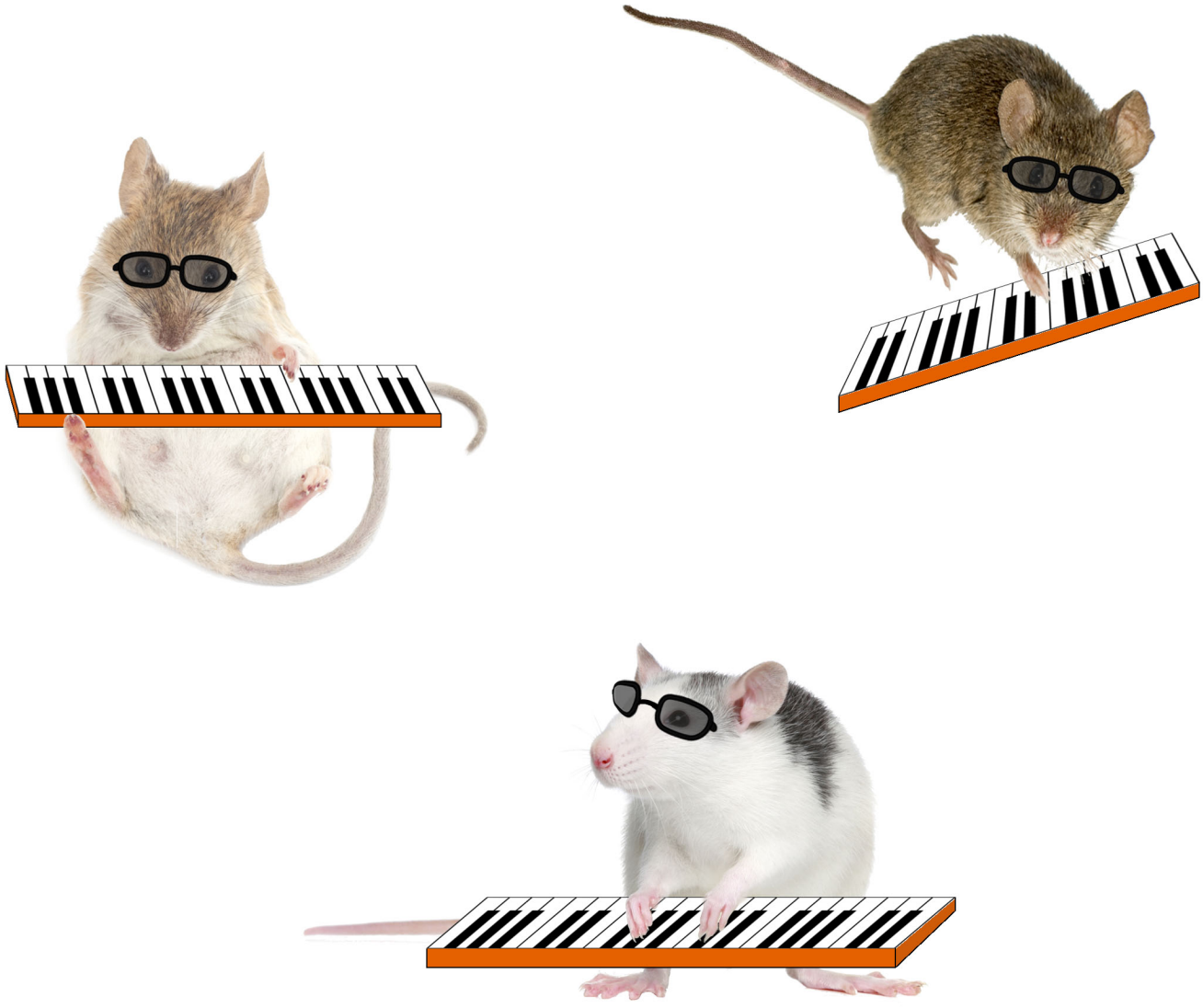
# Three Blind, 12-Tone Mice



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Ken Biegeleisen

## Commentary

*Three Blind, Twelve-Tone Mice*, although not "12 tone" in any rigid, formalized way, is nevertheless totally dependent upon the principles which emerged during a decades-long study of our 12 tone musical scale. The object of the piece is to create a theme-and-variations on the familiar melody of "Three Blind Mice", starting in the key of C major, and serially resetting it to harmonies in all 12 possible musical keys, *without* changing any notes of the original C-major melody. The tonality moves retrograde through the 12 keys by the cycle of "perfect fourths", *i.e.*, the keys of C-G-D-A-E-B-F#-C#-A♭-E♭-B♭-F, finishing with a reprise in the starting key of C.

Although it hardly needs to be said, I should nevertheless point out that the word "key", in such a setting as this, must be liberally interpreted. You cannot, for example, simply take the melody of "Three Blind Mice" in the traditional key of C, and set it to a harmony based upon the traditional key of C# — such a thing is categorically impossible. Therefore, our definition of "key" must be broadened, to include any musical form which the ear hears as being predominantly rooted in a single bass tone, without mandatory reference to such classical concepts as "major" or "minor". There are thus no key signatures in this work; all accidentals are written in.

(continued...)

The composer wishes to thank Mr. Peter Homans for encouragement and critical analysis. If not for his encouragement, coupled with stringent editorial review, this project would probably have ended with the mp3 recording, and the printed score might never have been completed. More importantly, his insightful analysis of the 1st draft correctly disclosed that the original variations in the "keys" of C# and E♭ were, upon deeper examination, covertly in the keys of A and C, respectively. This necessitated that they be re-written. The work, in its current form, is substantially improved because of his incisive intervention.


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# Three Blind, Twelve-Tone Mice

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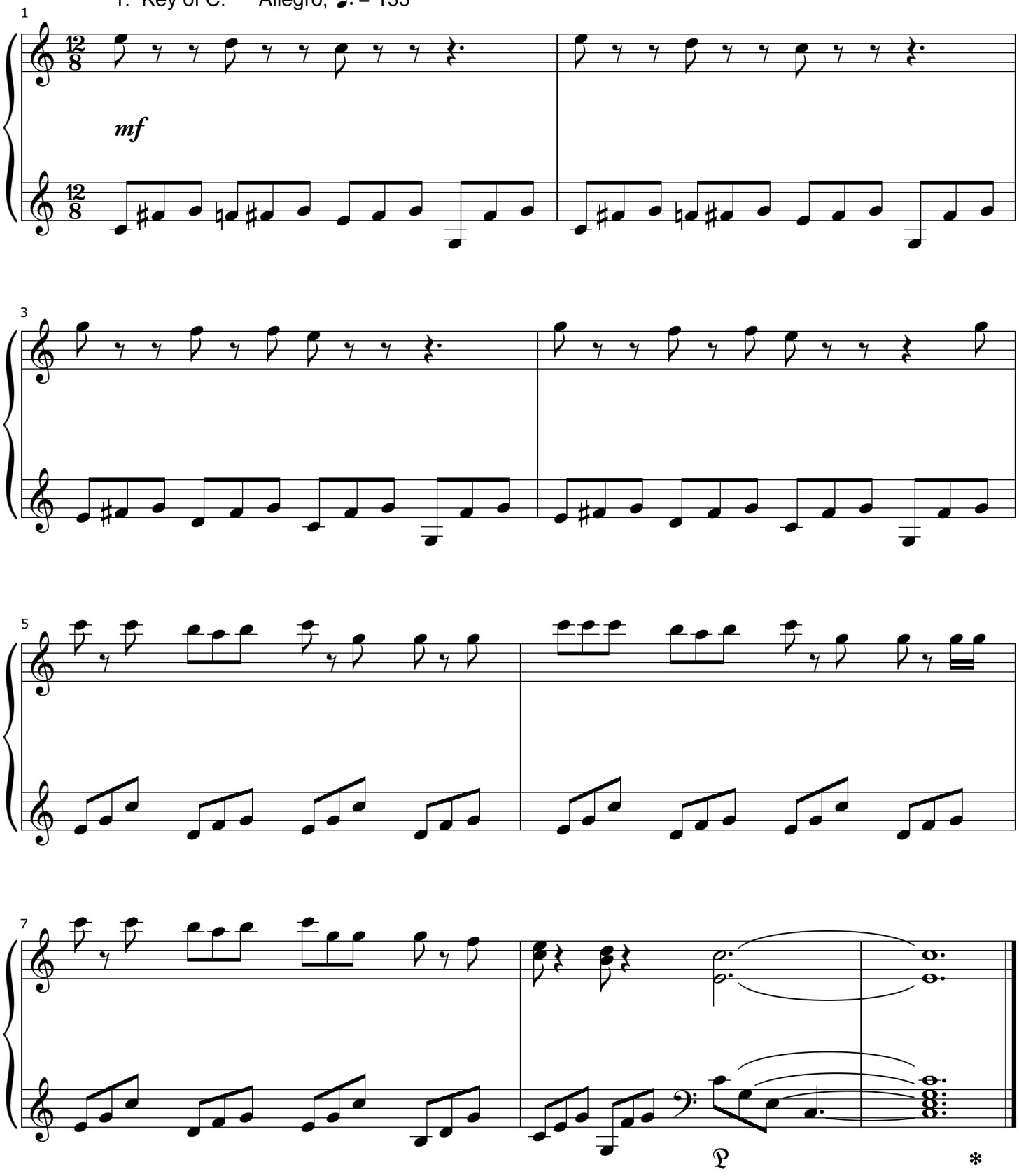
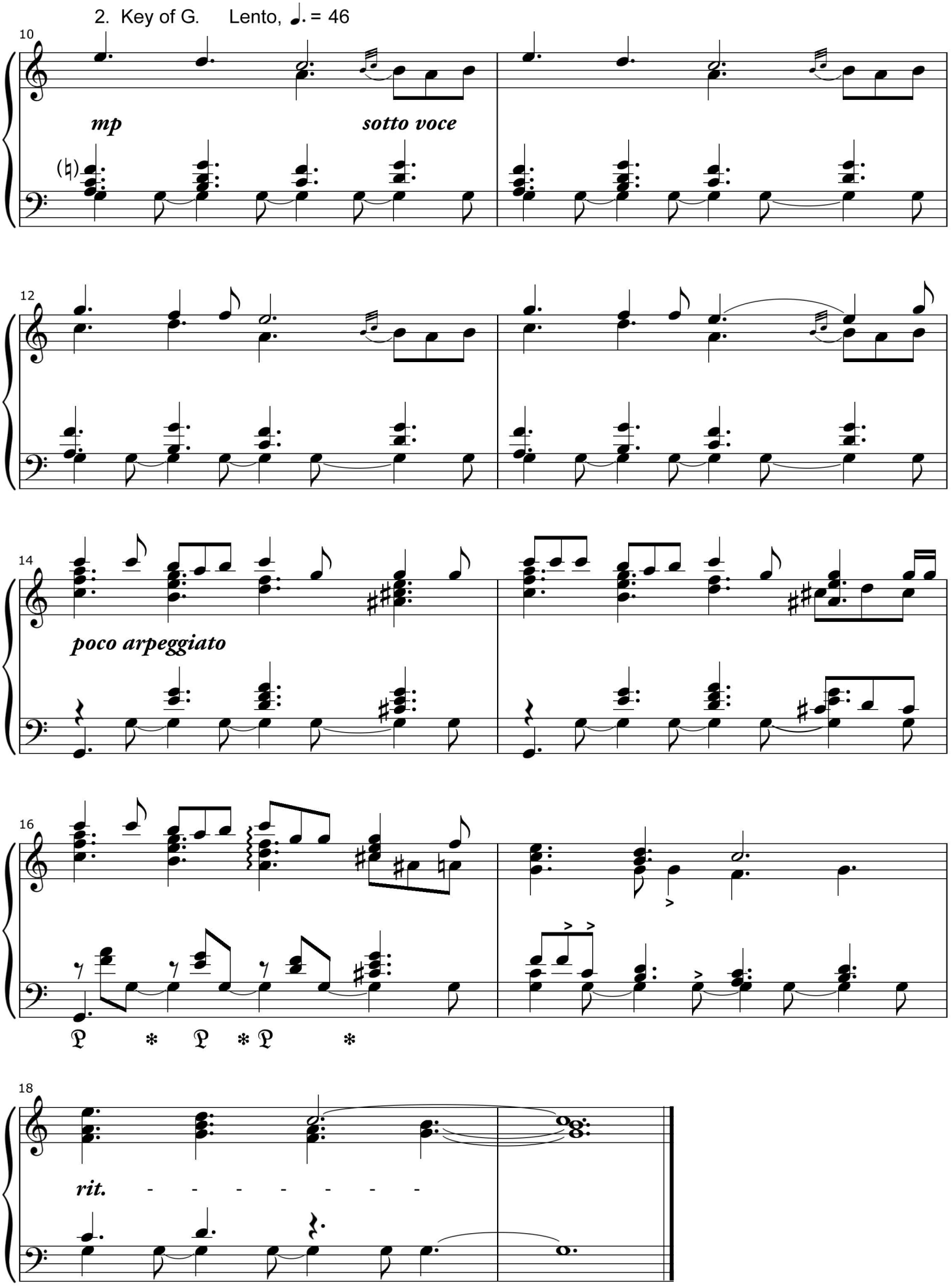
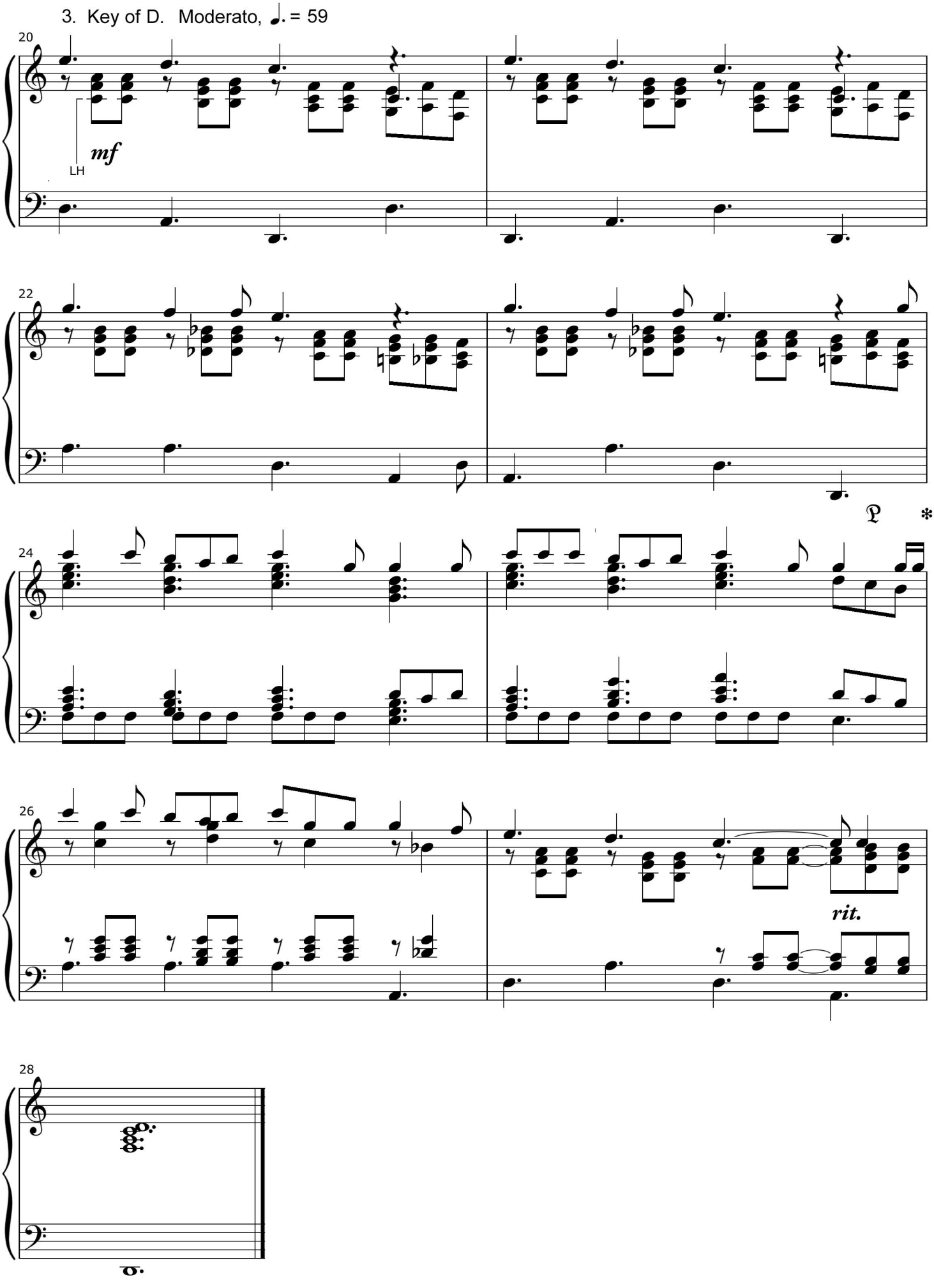
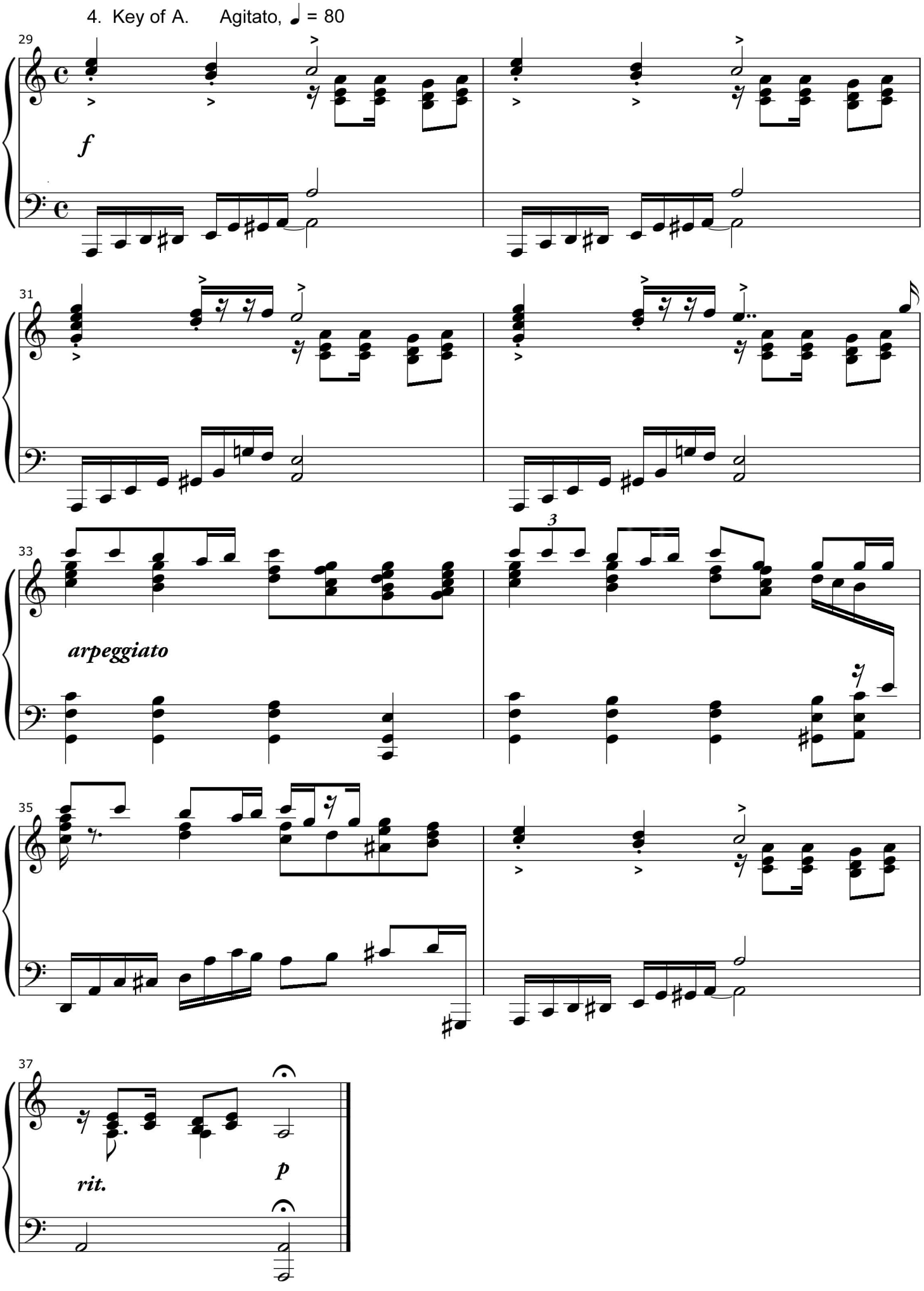
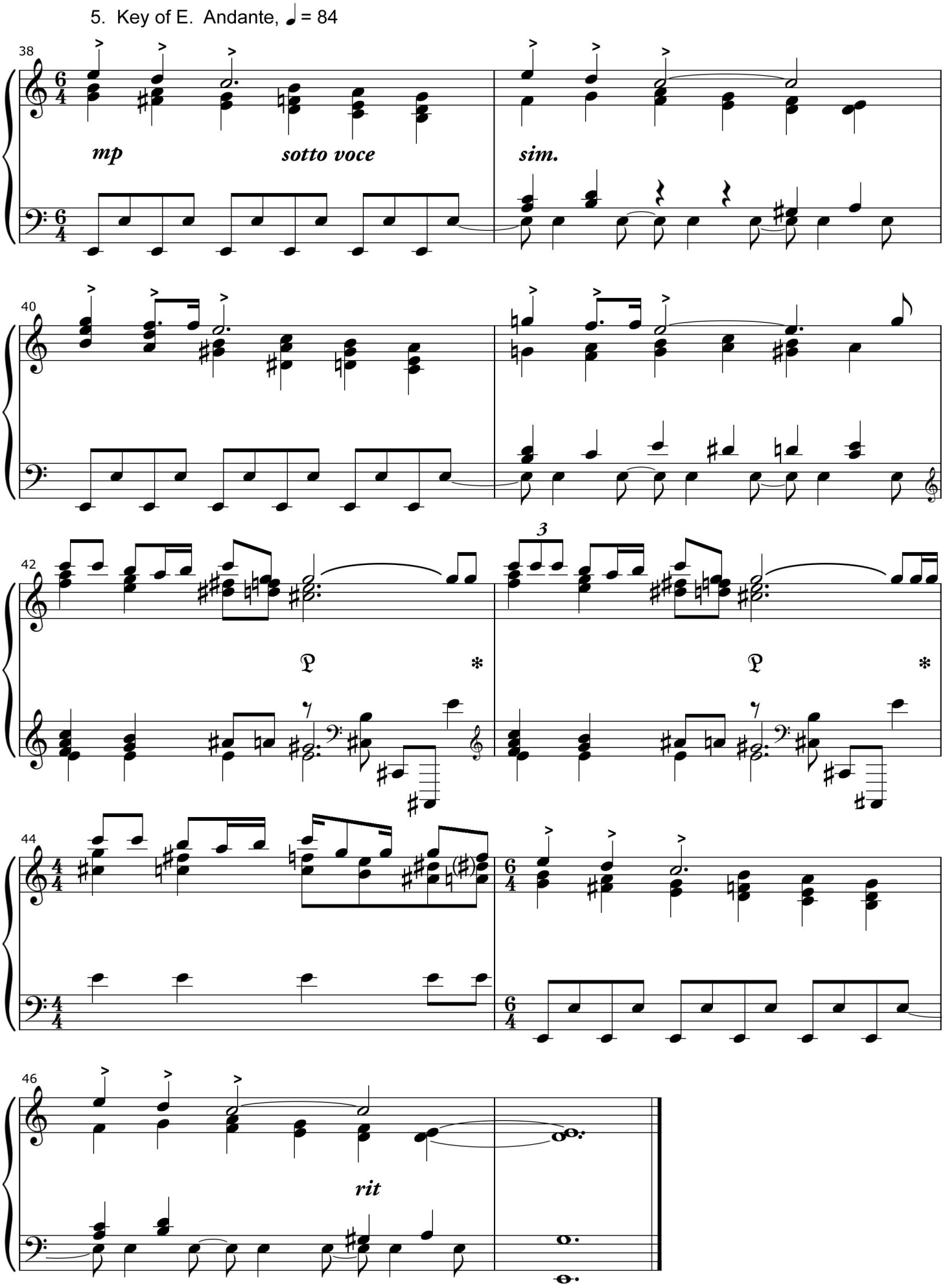
1. Key of C. Allegro, ♩. = 133

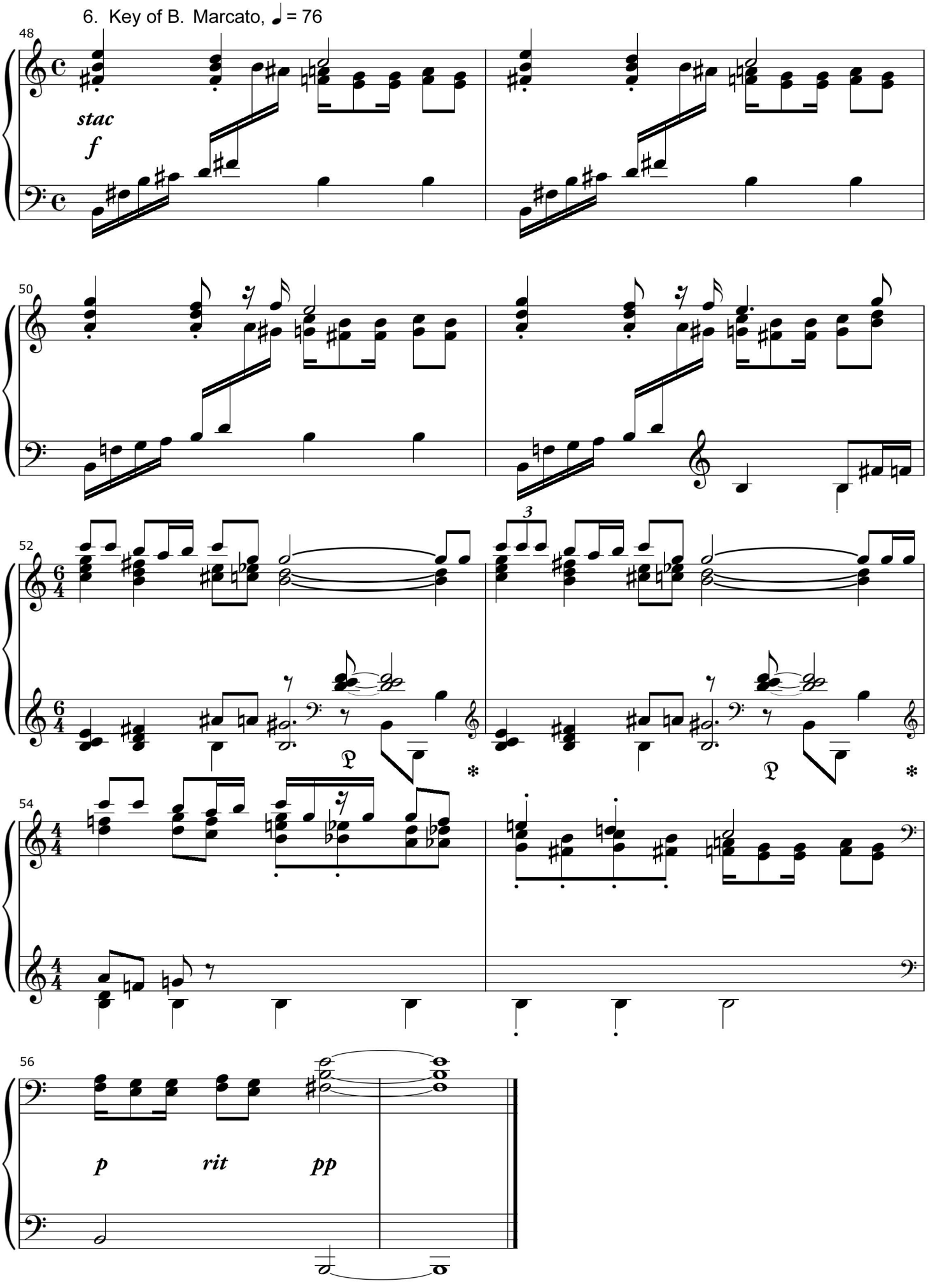


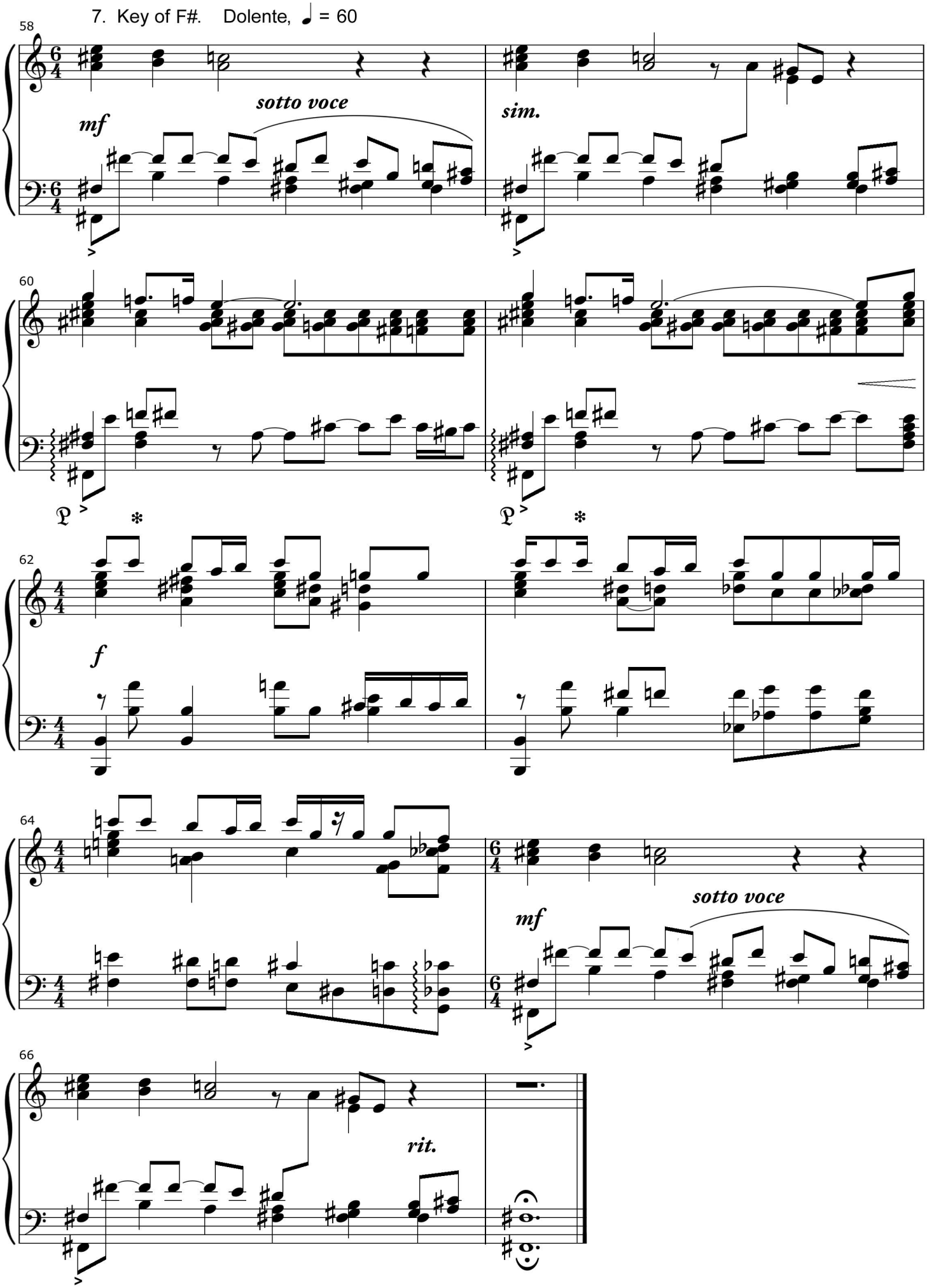

2. Key of G. Lento, ♩. = 46
10
mp
sotto voce
12
14
poco arpeggiato
16
18
rit.

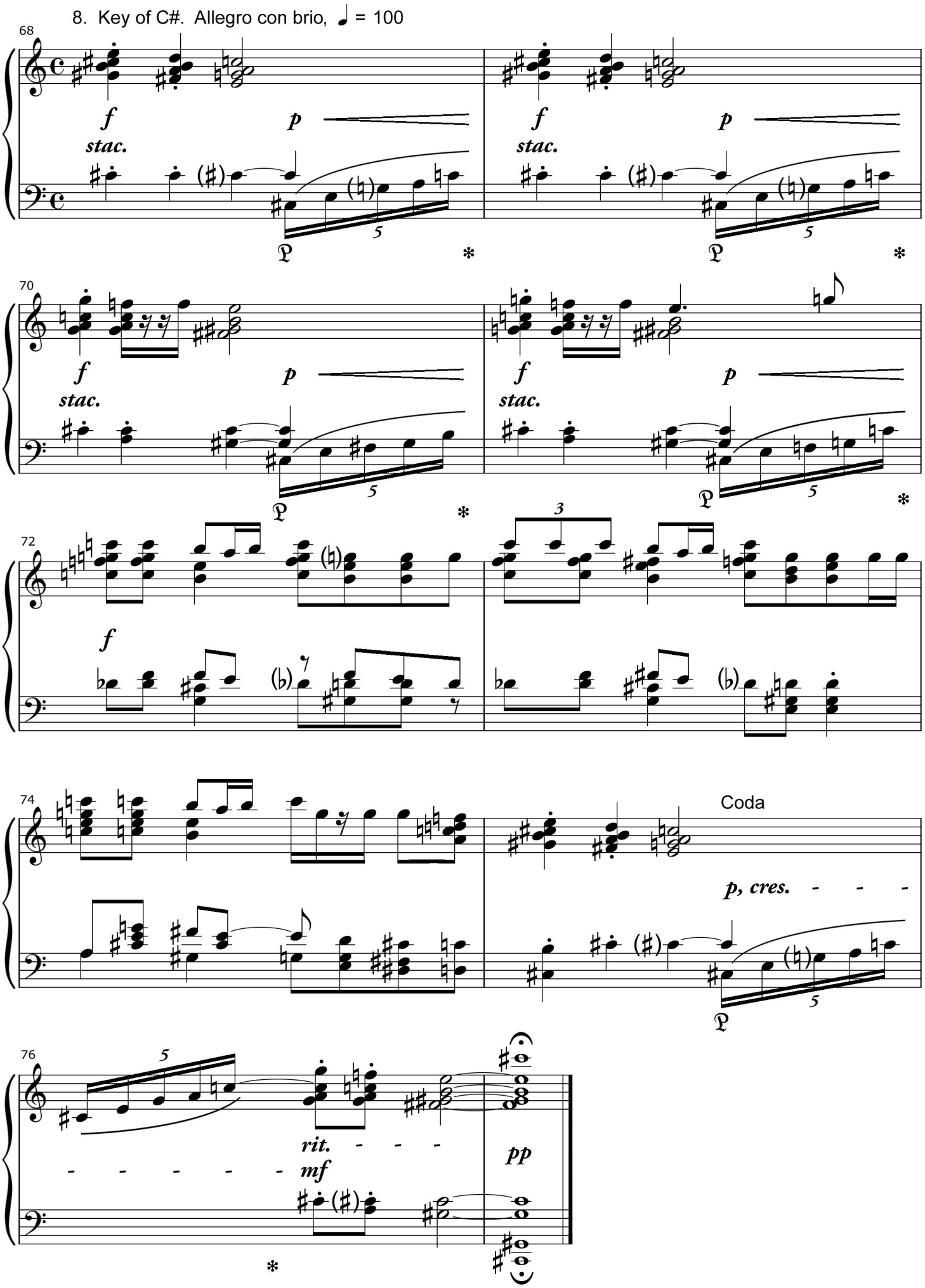

3. Key of D. Moderato, ♩. = 59
20
mf
LH
22
24
26
rit.
28


4. Key of A. Agitato, ♩ = 80
29
f
31
33
3
arpeggiato
35
37
rit.
p


5. Key of E. Andante, ♩ = 84
38
mp
sotto voce
sim.
40
42
3
44
46
rit


6. Key of B. Marcato, ♩ = 76
48
stac
f
50
52
3
54
56
p
rit
pp


7. Key of F#. Dolente, ♩ = 60
58
mf
sotto voce
sim.
60
62
f
64
mf
sotto voce
66
rit.


8. Key of C#. Allegro con brio, ♩ = 100
68
f
stac.
p
70
72
74
Coda
p, cres.
76
rit.
mf
pp

9. Key of Ab. Risoluto, ♩= 80

78

*mf*

80

82

3

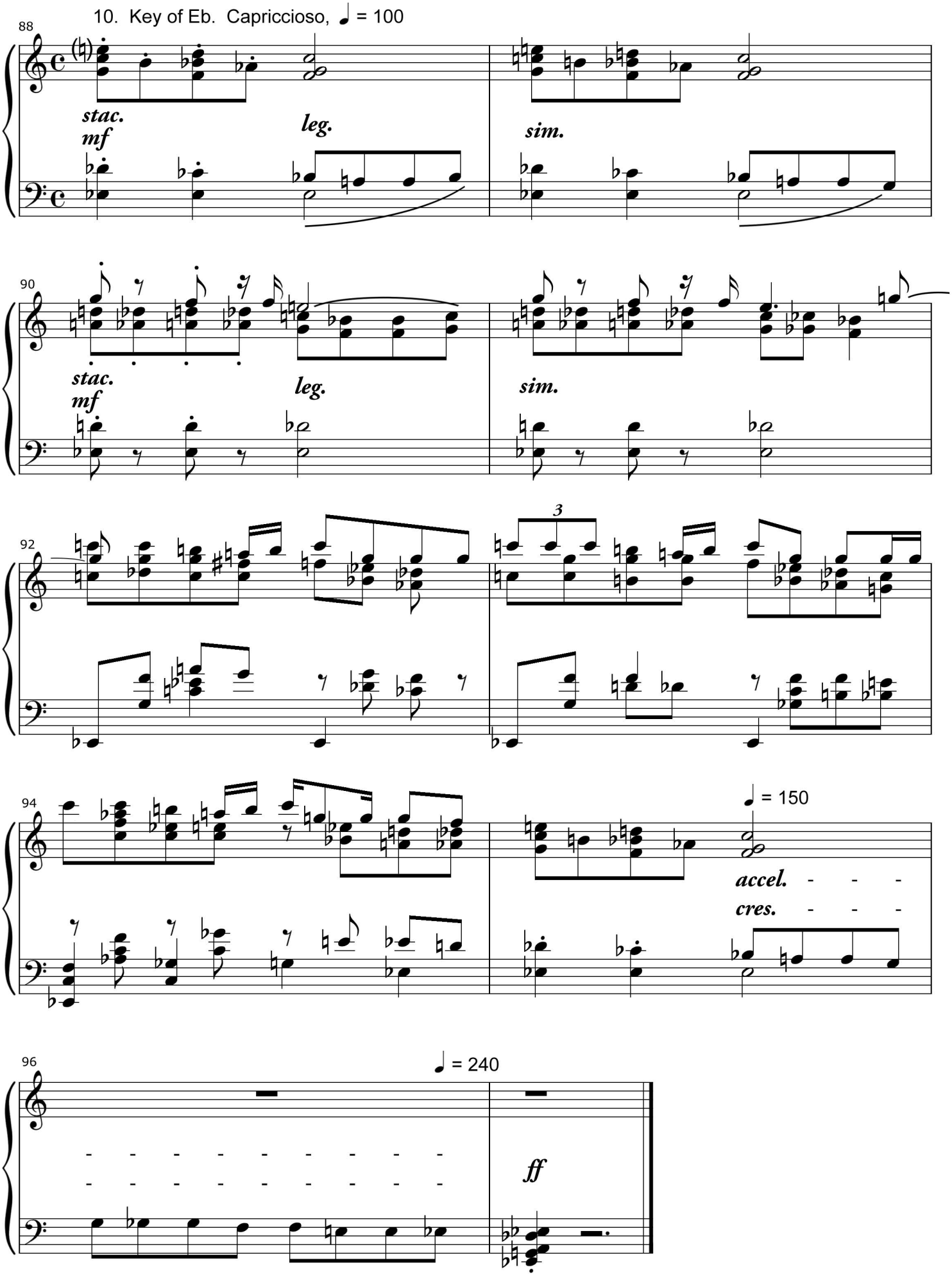
84

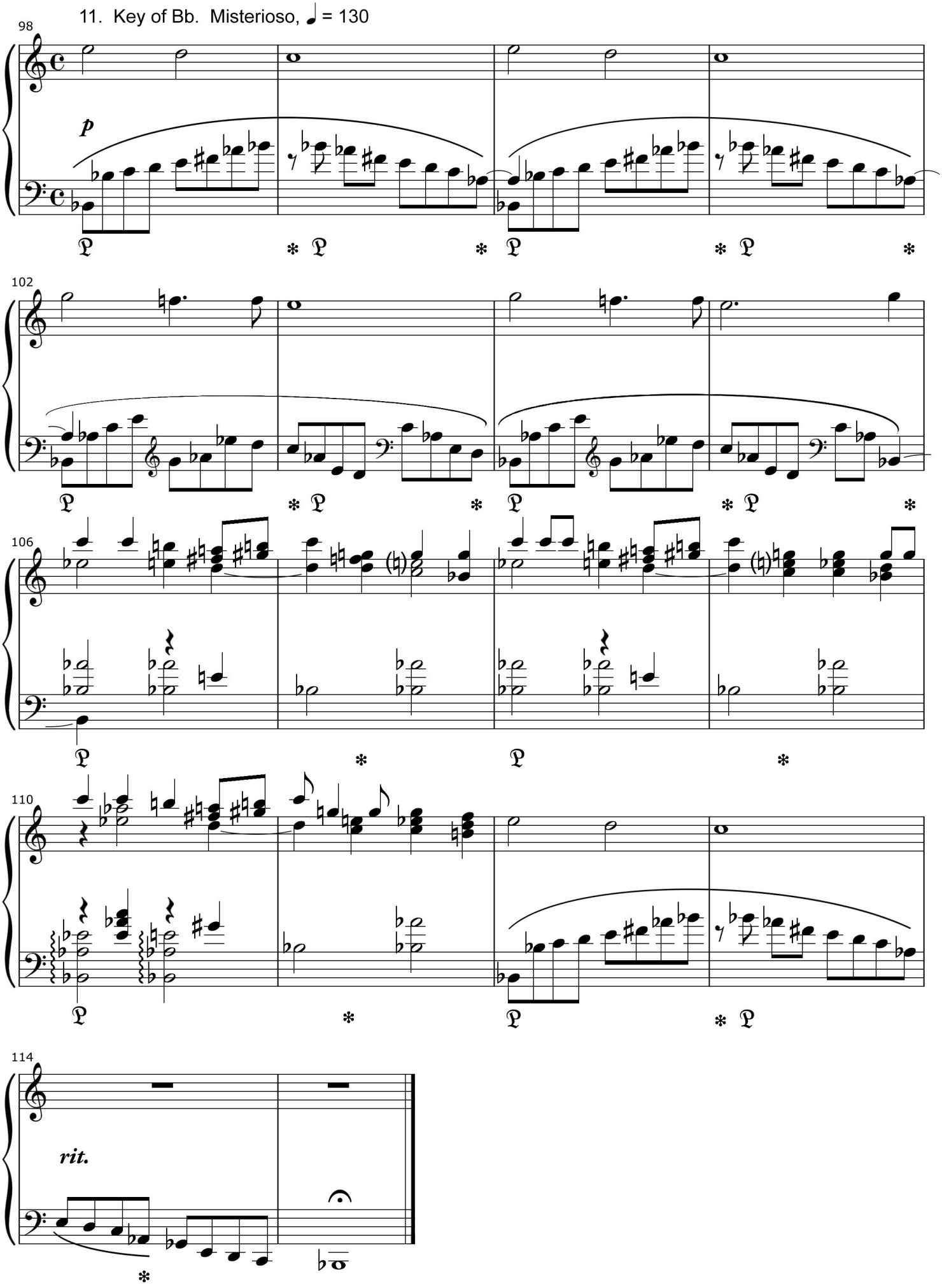
86

*p*

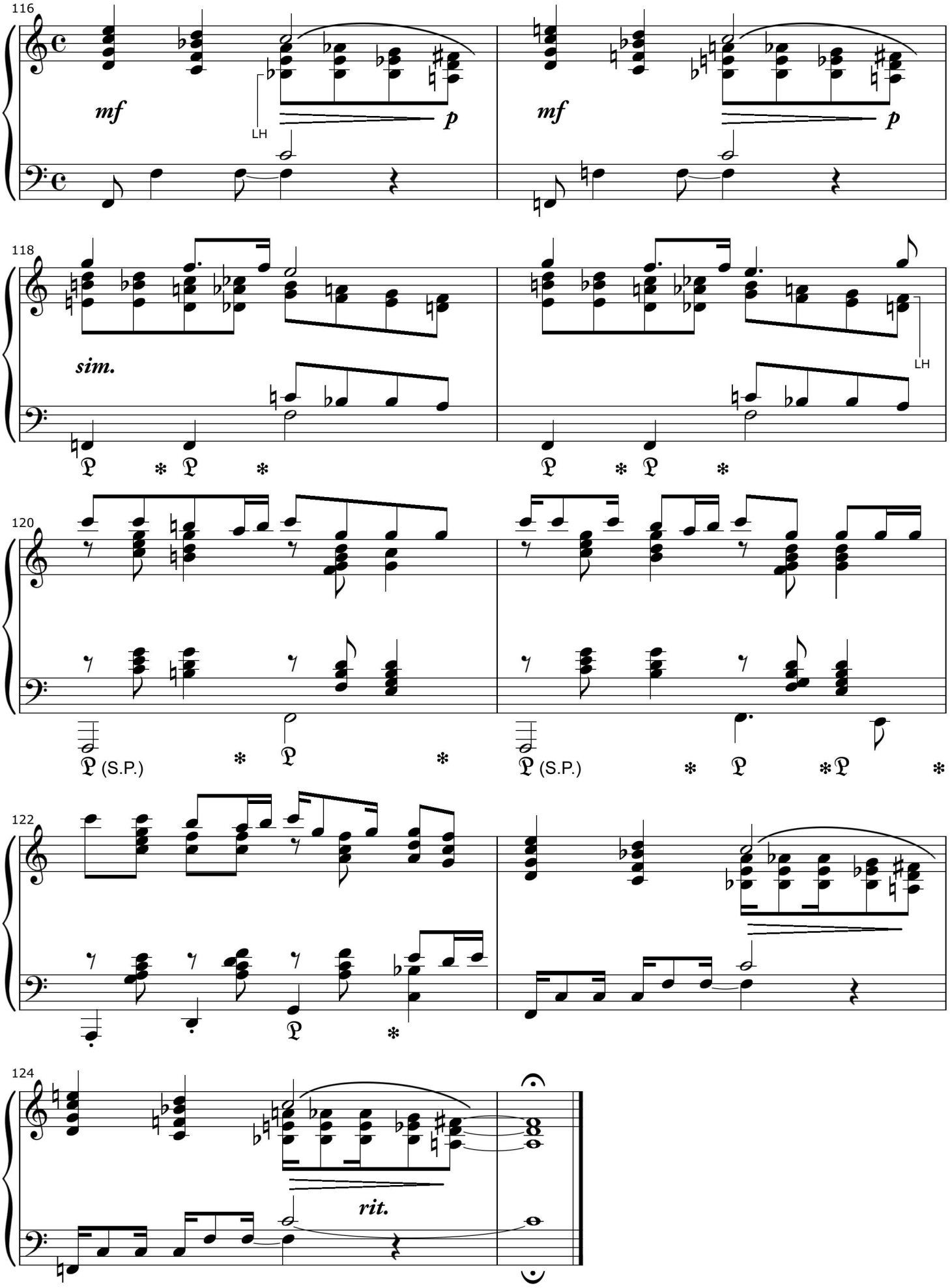
*rit.*

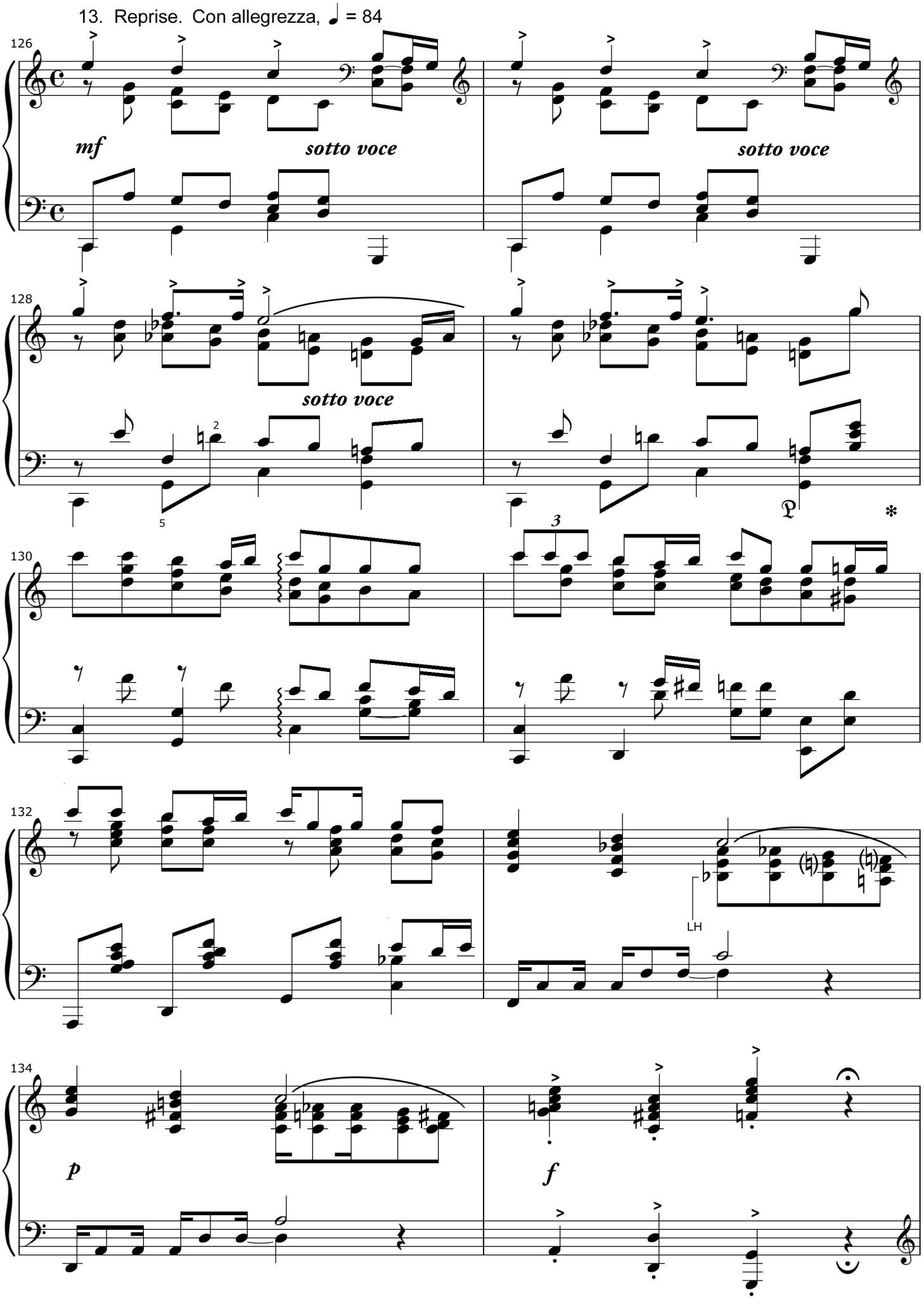
*pp*

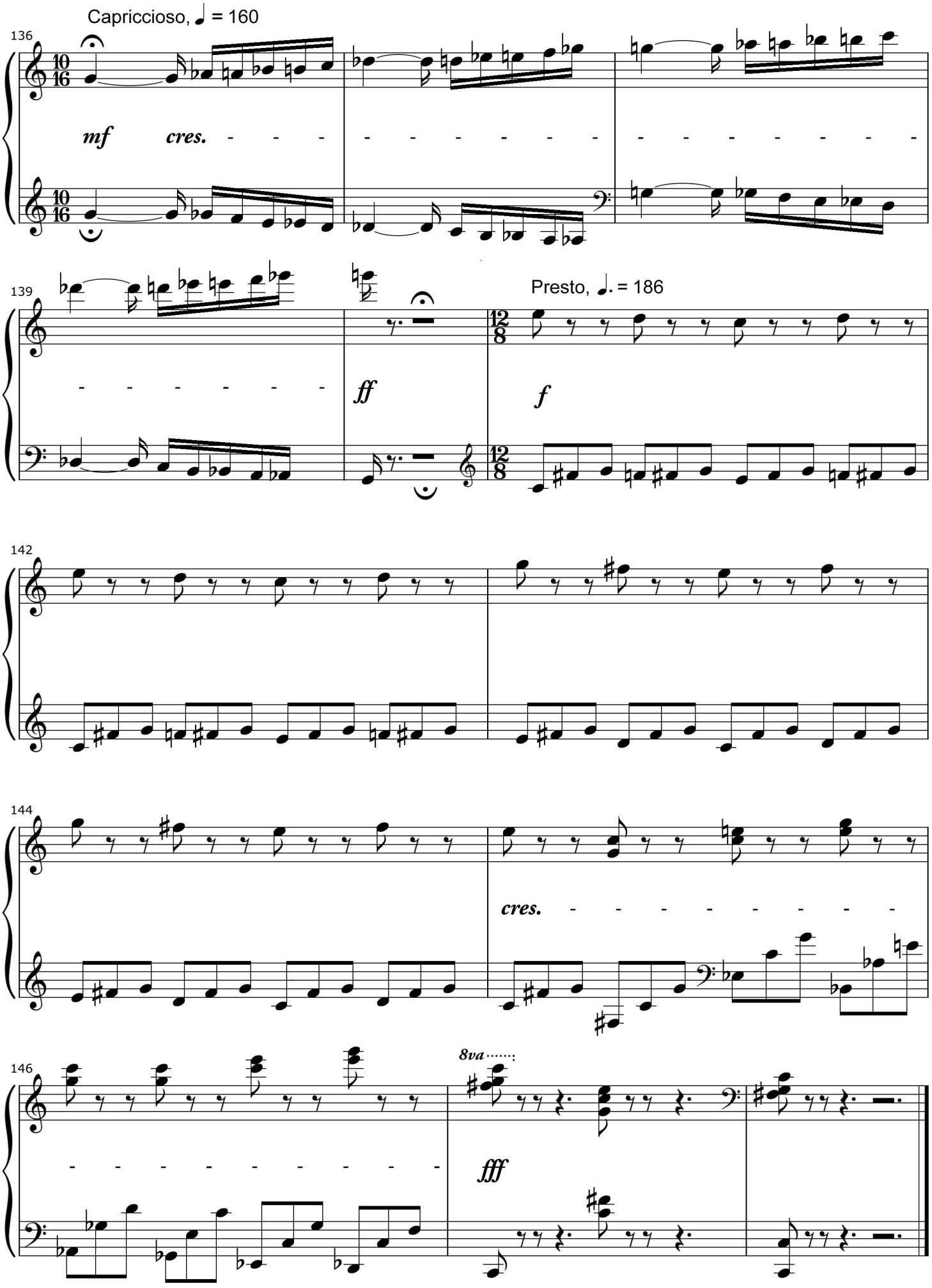

10. Key of Eb. Capriccioso, ♩ = 100
88
stac.
mf
leg.
sim.
90
stac.
mf
leg.
sim.
92
3
94
♩ = 150
accel.
cres.
96
♩ = 240
ff


11. Key of Bb. Misterioso, ♩ = 130
98
p
102
106
110
114
rit.

12. Key of F. Solemnly, ♩ = 54




13. Reprise. Con allegrezza, ♩ = 84
126
mf
sotto voce
sotto voce
128
sotto voce
130
132
LH
134
p
f

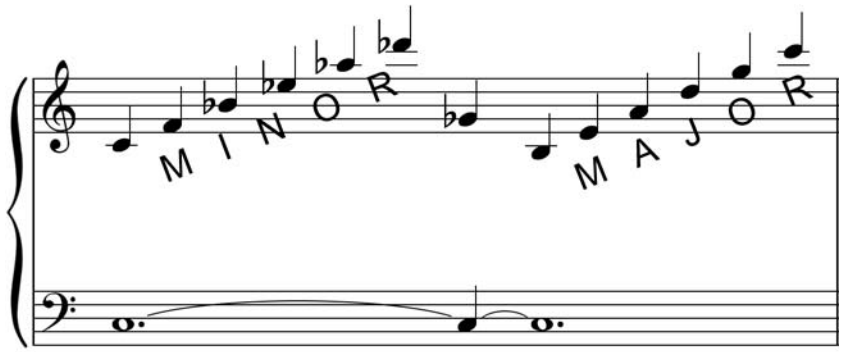

Capriccioso, ♩ = 160
136
mf
cres.
139
ff
Presto, ♩. = 186
f
142
144
cres.
146
8va
fff

## Commentary (continued)

With respect to the use of various formulae to generate 12-tone music, there exists among modern composers a universal understanding that we are somehow morally bound to treat all 12 notes of the scale equally, and to use them all with the same frequency and regularity. These formulae will, inevitably, force the composer to deal with certain difficulties which do not arise in classical music.

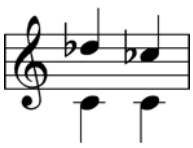
Little insight into the nature of these difficulties can be had through a study of the 12-note chromatic scale, where every part is exactly the same as every other part. A great deal of insight, however, can be had through a study of the only other scale which includes all 12 notes, namely that scale which results from steps of a "perfect fourth" (which is actually 5 half-steps, not 4).

A scale which progresses by the interval of a perfect fourth is exceedingly difficult for the human ear to hear as being a musically coherent collection of notes. Unlike the C-major scale, every part of which sounds like it's in the key of C-major, the perfect fourth scale has no uniform sound from end-to-end. When played in the ascending direction, it starts out sounding fairly minor, passes through the tritone, which is tonally amorphous, and winds up sounding major:



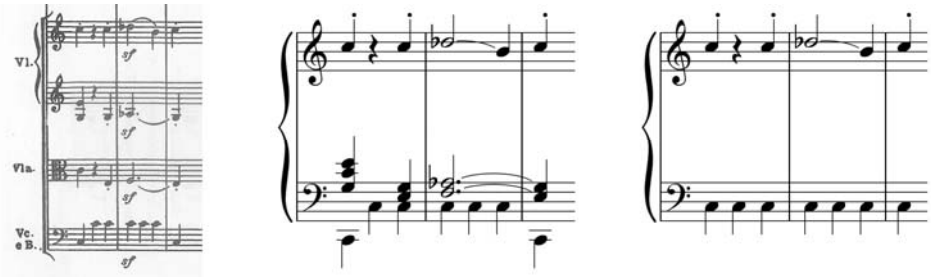

The human ear has no difficulty hearing and comprehending either the beginning or the end of this scale, but hearing and comprehending them both simultaneously is exceedingly difficult. A discussion of this is outside the scope of this brief commentary; suffice it to say that the problem can, for brevity, be reduced to the problem of "hearing", in the "mind's ear", the interval between the two notes flanking the tritone, namely (in this example) D-flat and B, which constitute a musical "bridge" of sorts; *i.e.*, a bridge from the "minor" to the "major" portions of the scale. In the absence of a piano or other supportive musical instrument, a musician who closes his eyes and tries to hear the sounds of this scale in the "mind's ear" will find this bridge exceedingly difficult to cross. In my own formulation of things I refer to this bridge as "the forbidden interval". It is very important in 12-tone music, because there's no way to prevent it from arising, and whenever it does, it creates a problem for the composer.

The terminology "forbidden interval" therefore refers specifically to the particular musical whole step which goes from the flatted $9^{th}$ to the major $7^{th}$ of any given key, while holding the bass note constant:



If you play this exactly as written, it sounds harsh and dissonant. Out of context, it has no musical meaning, and it's simply not pleasant to listen to. It needs harmony to give it meaning.

But how on earth do you harmonize such a thing? In the entirety of all classical music, I know of only one single setting in which the forbidden interval is found, namely in the resolution of the so-called "Italian 6th" to the dominant, before returning back to the tonic. An excellent illustration of this may be found in Beethoven's prototypical 1st Symphony, 3rd movement, measures 58-60. In the figure below, the actual score is on the left, a piano reduction in the middle, and the extracted and isolated "forbidden interval" on the right:




This musical setting of the "forbidden interval", however, is of no help whatsoever as a model for the 12-tone composer, because the D♭ of the Italian 6th is merely a passing tone. It dances about the dominant, but has no essential melodic significance.

When we employ our various formulae to generate 12-tone music, our formulae will, inevitably, force us into intimate contact with the "forbidden interval" in settings where the two notes are indeed essential melody notes, not merely passing tones. If we wish for our music to sound pleasing to the ear, we must find a way to deal with these unruly notes. But how? In the present work, these problem notes arise three times, each giving rise to a different solution. Whether these are "good" solutions must obviously remain a matter of opinion.

## "Rules of the Game"

The melody of "Three Blind Mice" consists of an "A" section (corresponding to the lyrics "Three blind mice, three blind mice, see how they run, see how they run") and a "B" section ("They all ran after the farmer's wife...", etc.). These are the rules for the "A" section:

**Rule #1**: The melody must remain in the key of C throughout, and, other than in tempo, must not be significantly altered in any way.

**Rule #2**: The "A" section must sound like the designated key, or, in the event that the musical style is not easily amenable to the strict identification of a proper classical key, it must be unequivocally closer in sound to the designated key than to any other.

The rules for the "B" sections were more relaxed. I demanded only that it follow logically from the "A" section, and that it merge seamlessly back into it. In particular, I should note that I allowed the "B" sections to modulate freely, in accordance with the final rule:

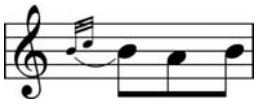
**Rule #3:** This being music, which is a form of entertainment, the final result must be entertaining, and the entertainment must take precedence over the "academic merit".

## Specific comments on some of the more difficult themes/variations

**Key of G** (variation #2): Going into this project, I envisioned that the key of G, being the dominant, and therefore closest possible key to C, would be the easiest to work in. Actually, it was, without a doubt, the

most difficult. The problem is that the 3rd melody note (corresponding to the word "mice" in the phrase "Three blind mice...") is C, which is a suspenseful note in the key of G, demanding resolution. But the melody is fixed! What resolution is possible?

I could have composed a non-traditional variation in the key of G; something far from the beaten path of traditional tonality; but I wanted the keys closest to C to sound "traditional". My proposed solution to this problem (see measure 10) was to add the little *sotto voce* phrase...



...after the "Three blind mice" melody. Whether or not I should be charged with the crime of violating the very first of my own stated rules ("the melody...must not be significantly altered in any way") is a question whose answer I shall leave to the listener.

**Key of F#** (variation #7): In measure 60 we encounter the first of three occurrences of the above-referenced notorious "forbidden interval". The problem of dissonance, in this case, was solved by using a contrary motion chromatic left-hand figure, which somehow defused the awkwardness and unpleasant sound of the unruly interval.

**Key of C#** (variation #8): The opening of this variation (mea 68) contains the second of the three occurrences of the "forbidden interval". The problem here is solved by "resolving" the forbidden interval into a first-inversion "A" chord. This, however, creates a new problem, namely that this procedure moves the variation strongly into the key of "A", from whence it must be returned.

Returning proved to be no easy matter. The music was like a stubborn mule who insists on veering off to the side of the road, in defiance of its master's efforts to keep it going straight. The original last chord of the variation (now moved backwards one measure, to measure 75) was so strongly suggestive of the key of "A" that I was forced to add a coda (measure 76, which is a near-literal copy of measure 70) in order to force the stubborn animal to return to the key of C#. Which it did.

(That'll teach you a lesson, ya' ol' mule!)

**Key of E♭** (variation #10): In the first measure (mea 88) we find the third and last occurrence of the "forbidden interval". As in the case of variation #7 (F#), the inherent unpleasantness of the interval was solved by judicious use of chromatic voice leading.

**Key of F** (variation #12): This variation, which I hope would have pleased Aaron Copland, contains a number of musical formations requiring a large hand. For smaller hands, the rolling of certain chords and the use of the pedal will be necessary. Fortunately, these will not do too much harm to the sound.

To hold the very low bass note in measure 120 as written, a piano with a sostenuto pedal is desirable. Otherwise, the sustain pedal is required, which, fortunately, won't slur the right hand too much, because the accompanying high notes in the right hand are in a register that doesn't sustain very well.

**Reprise, key of C** (variation #13): I originally intended to end the piece at F, but when I stumbled across this delightful pattern of scales built upon chords of perfect fourths, I found the temptation irresistible, so I added a reprise in the key of C. Unfortunately, like the F variation, this one requires a large hand to play as written; otherwise, judicious chord-rolling and pedaling will get one through.