Rand Steiger

Traversing

(2006)

solo cello with digital signal processing, and string orchestra

Commission: Brunnel Bicentenary Commission

Premiere: September 28, 2006, Southbank Sinfonia, Peter Wiegold, cond., Mathew Barley Cello, Cadogan Hall, London

Recording: EMF078 Rand Steiger, Ecosphere, Music for Instruments and Electronics

Dynamics: The dynamic marking ***n*** is frequently used to indicate notes that begin imperceptibly and gradually fade in over the length of the indicated crescendo. Similarly, decrescendos that end at a rest without a dynamic marking indicate a complete diminuendo to silence. Please note the starting and ending points of these transitions precisely.

Accidentals: Accidentals carry through the length of the bar, but only in the octave in which they appear.

Jeté: Jeté, or "thrown bow" is indicated by a slur following the note with a series of dots underneath it. The motion begins at the indicated note, and the bow is then allowed to freely bounce as long as possible after the note begins.

Electronics:

A laptop computer running Max/MSP software is used for digital signal processing of the sound of the instruments in a variety of ways throughout the piece. Carefully placed hypercardioid microphones are to be used on the instruments (one for flute, one for cello, stereo pair inside the piano, stereo pair over the marimba, stereo pair over the non-pitched percussion instruments) connected to the audio interface of the computer. Two channels of processed sound are then returned to the house system, with two speakers on stage (far left and far right in front of the performers). Great care is to be taken when setting the level of the signal processing amplification. The sound from the speakers should not be louder than the original acoustical sound of the cello. Ideally, the listener will hear the natural sound of the cello, along with a “halo” of transformed sound, blending together equally. Monitor speakers are not necessary for the performers. The ensemble should follow the indicated dynamics and balance and tune in the usual manner. The electronic processing follows the performance, and therefore the performers have complete interpretive freedom.

More details about the electronics are available in a separate document. A few general notes are provided here. There are no synthesized sounds in the electronic part. All sound is produced by real-time digital signal processing of the cello sound. The amplified cello signal is often dynamically panned between the two speakers creating a spatial motion analogous to the musical gestures. The cello is also processed at various times with multitap delay, harmonizing, or phased shifting.

Contact:

For further information please contact the composer by email to this address:
rand@ucsd.edu

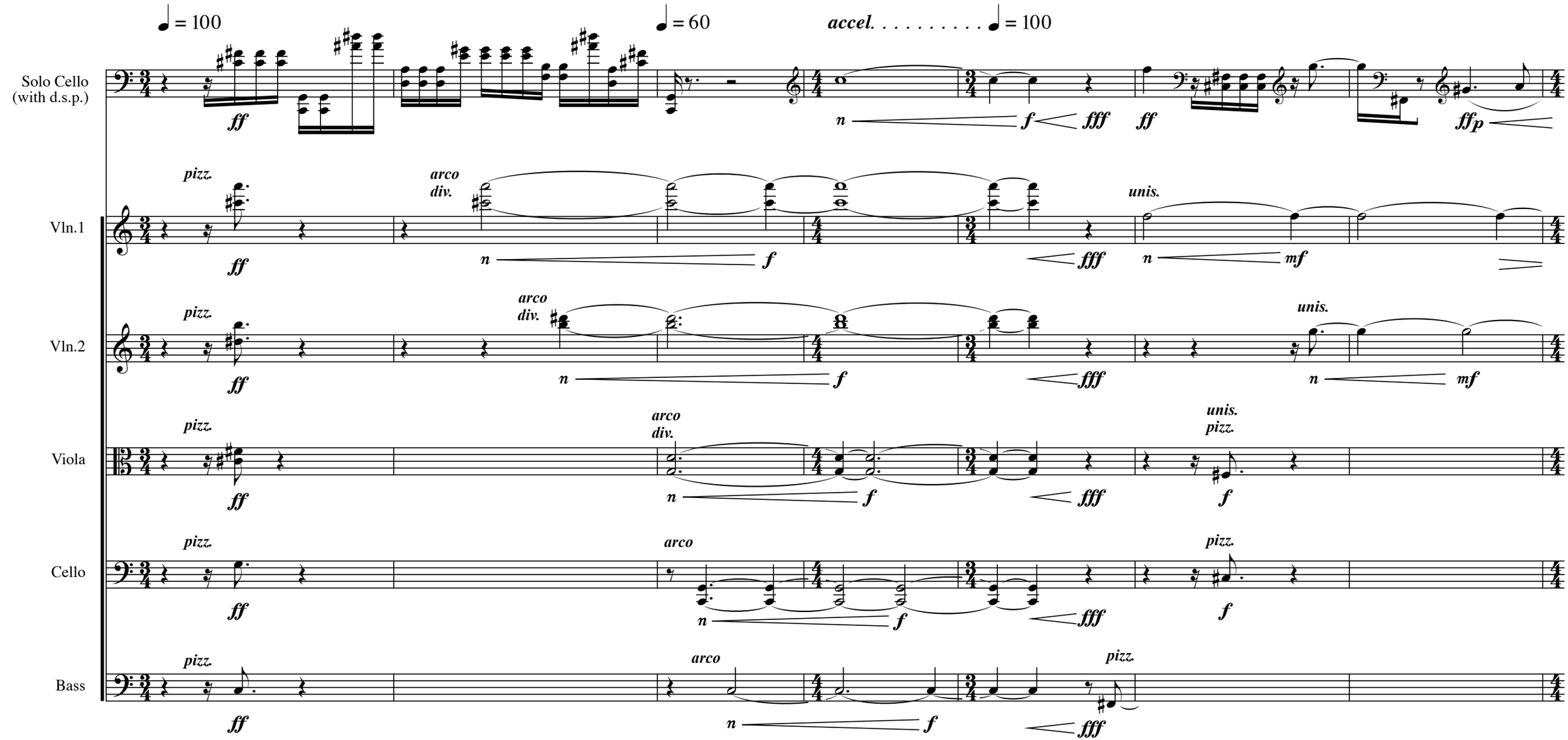
Additional information may be found on the following web site:
http://rand.info

The Brunel Bicentenary Commission
for Mathew Barley, Peter Wiegold,
and the Southbank Sinfonia

Rand Steiger

Traversing

for solo cello with digital signal processing, and string orchestra



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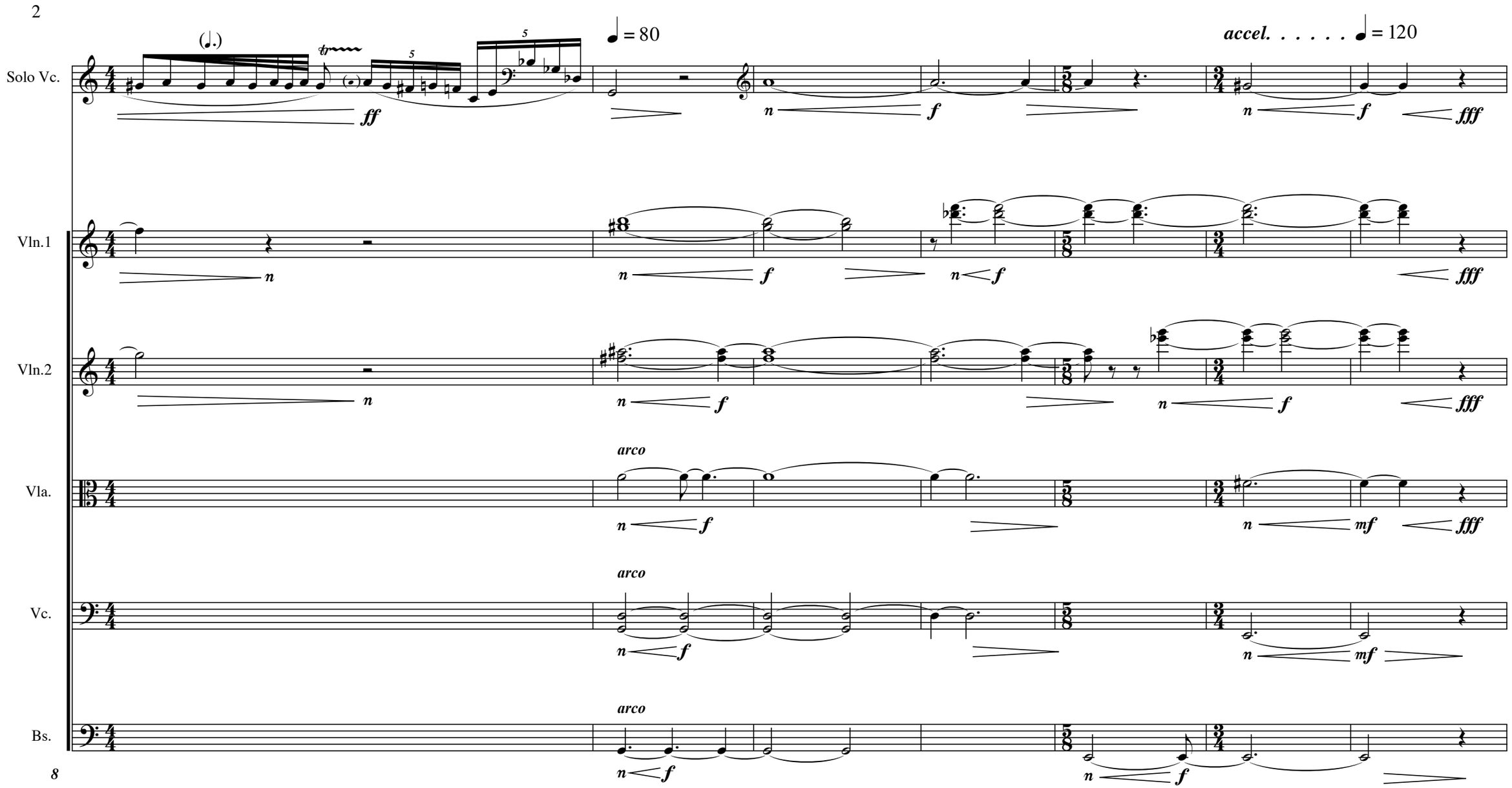
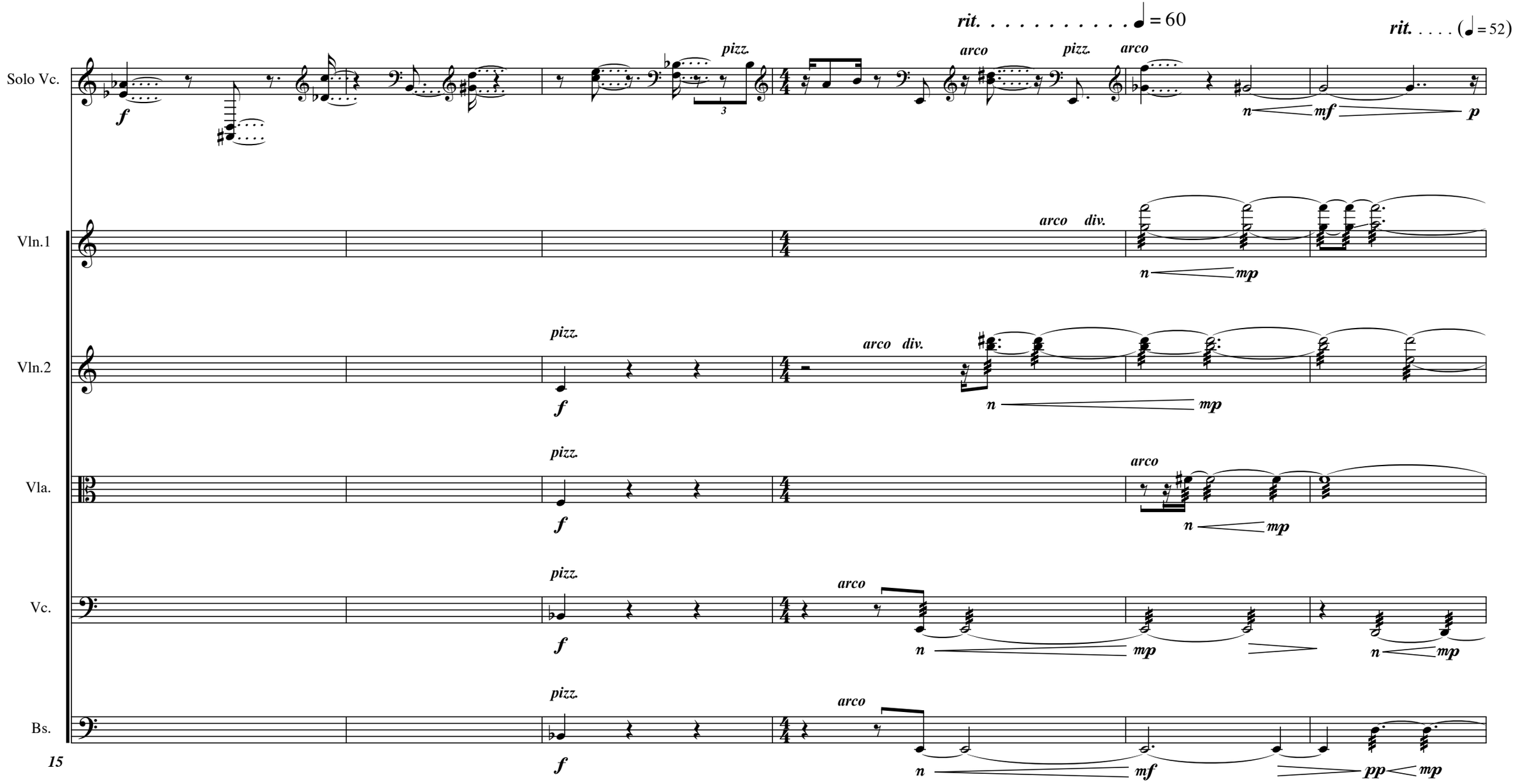
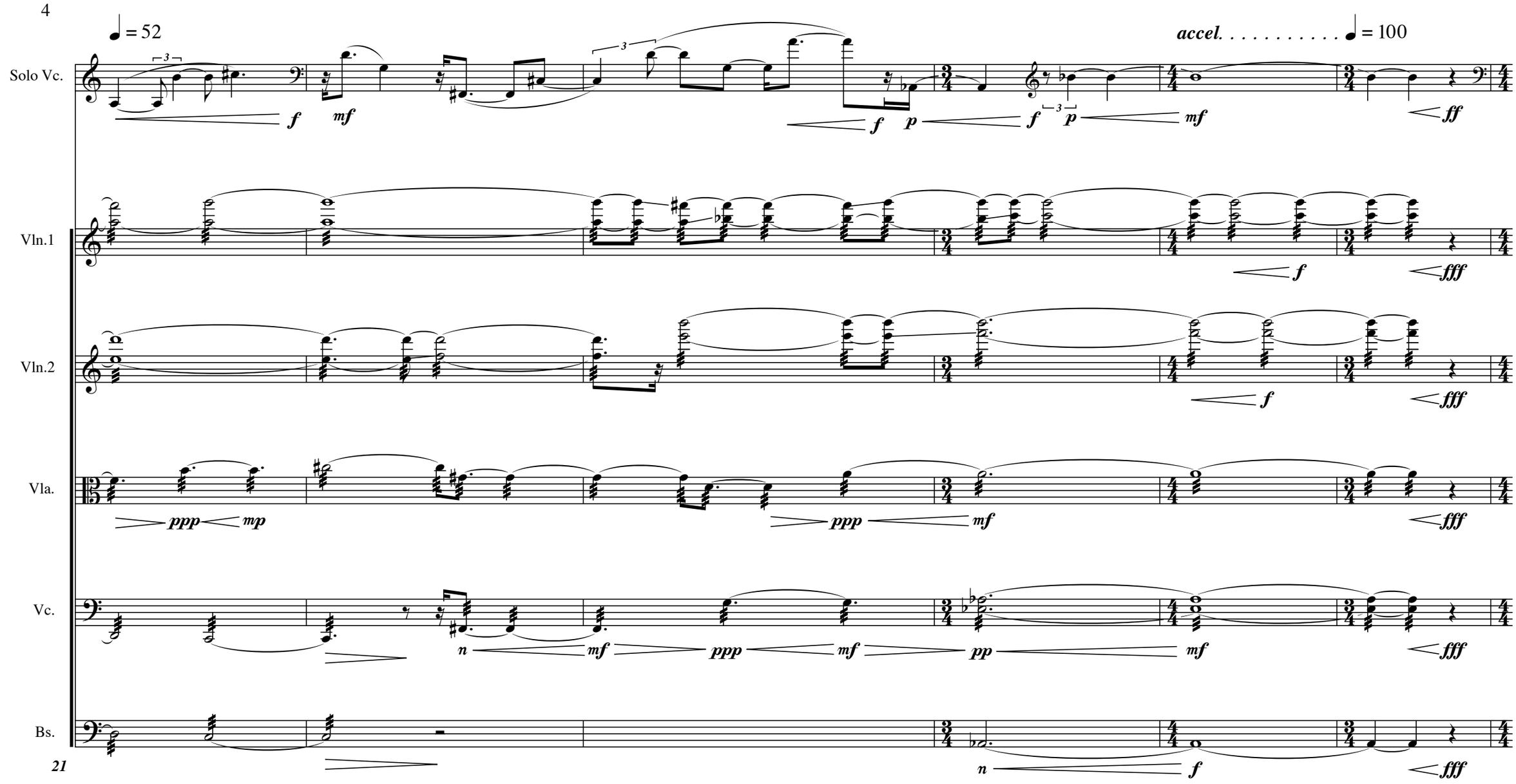
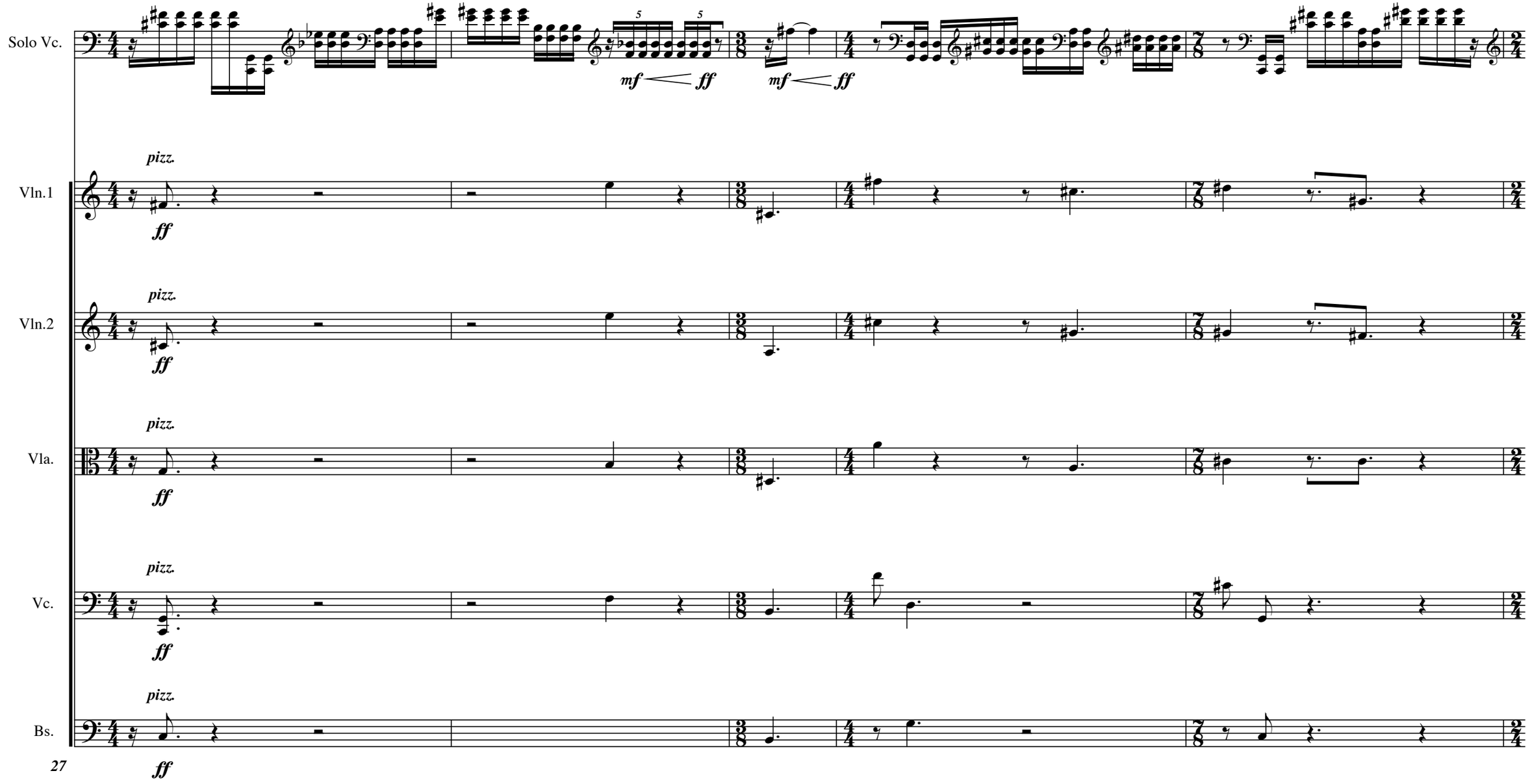
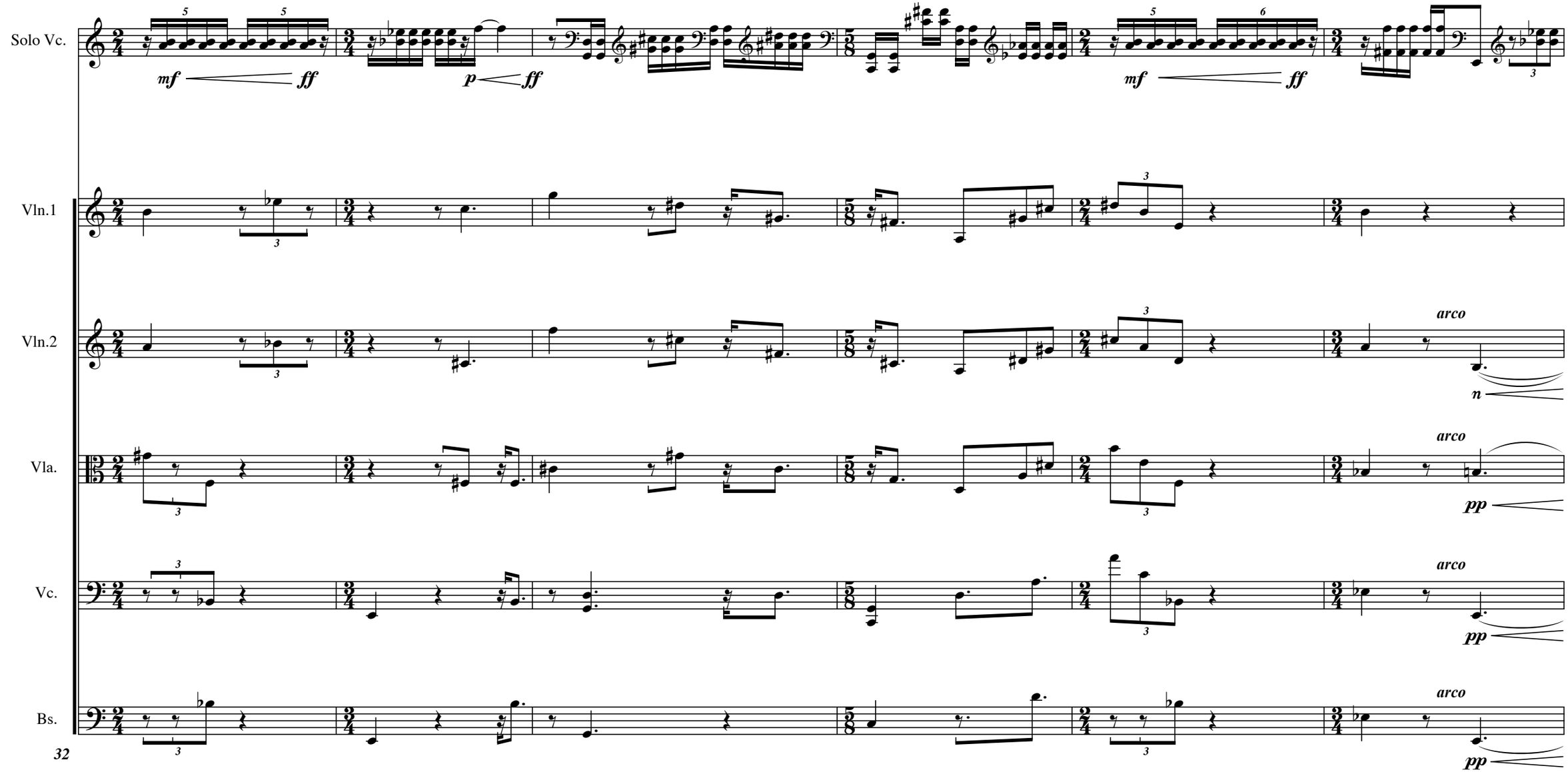
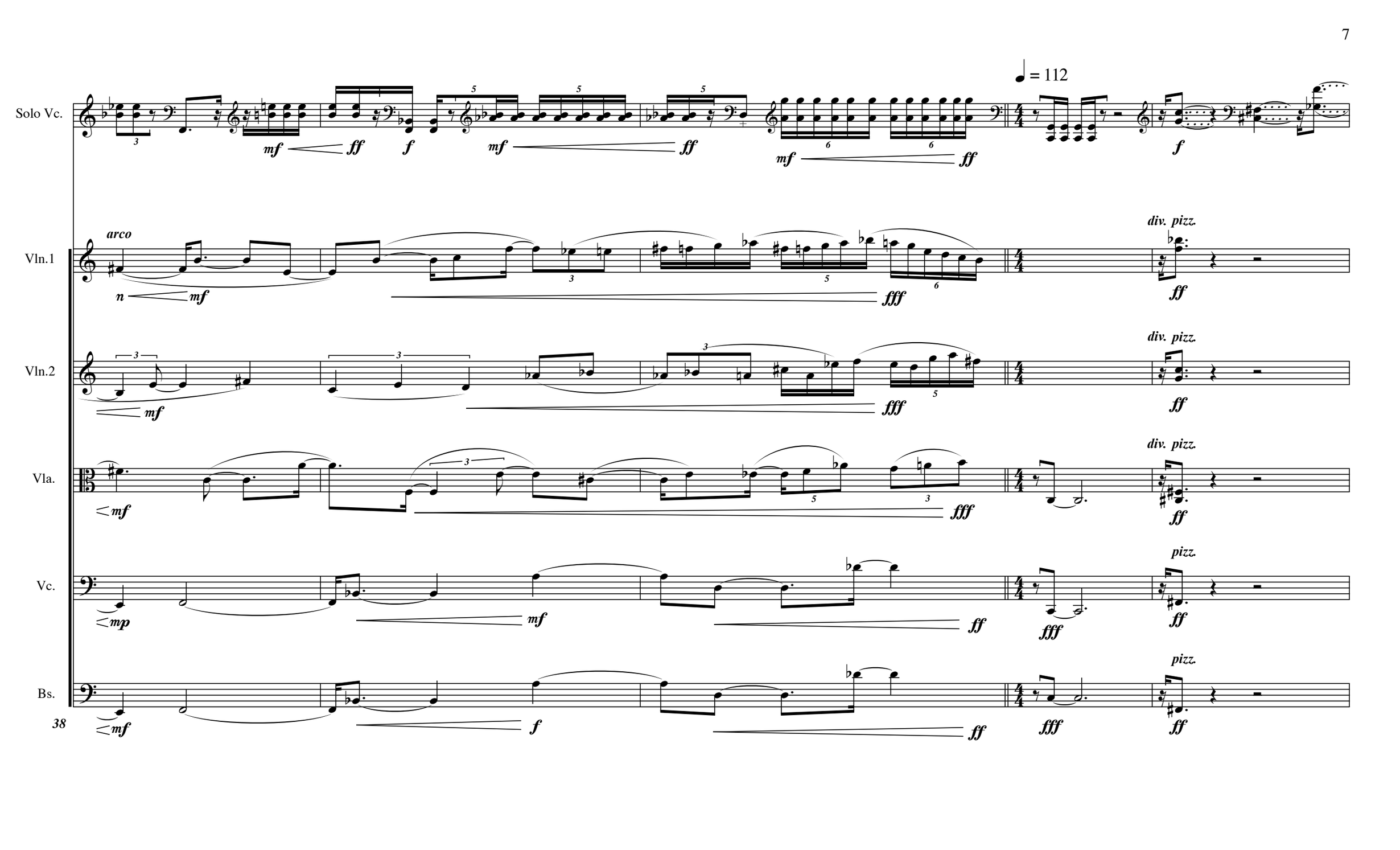

(♩.)
♩ = 80
accel. . . . . ♩ = 120
Solo Vc.
Vln.1
Vln.2
Vla.
Vc.
Bs.
arco
ff
f
mf
fff
n

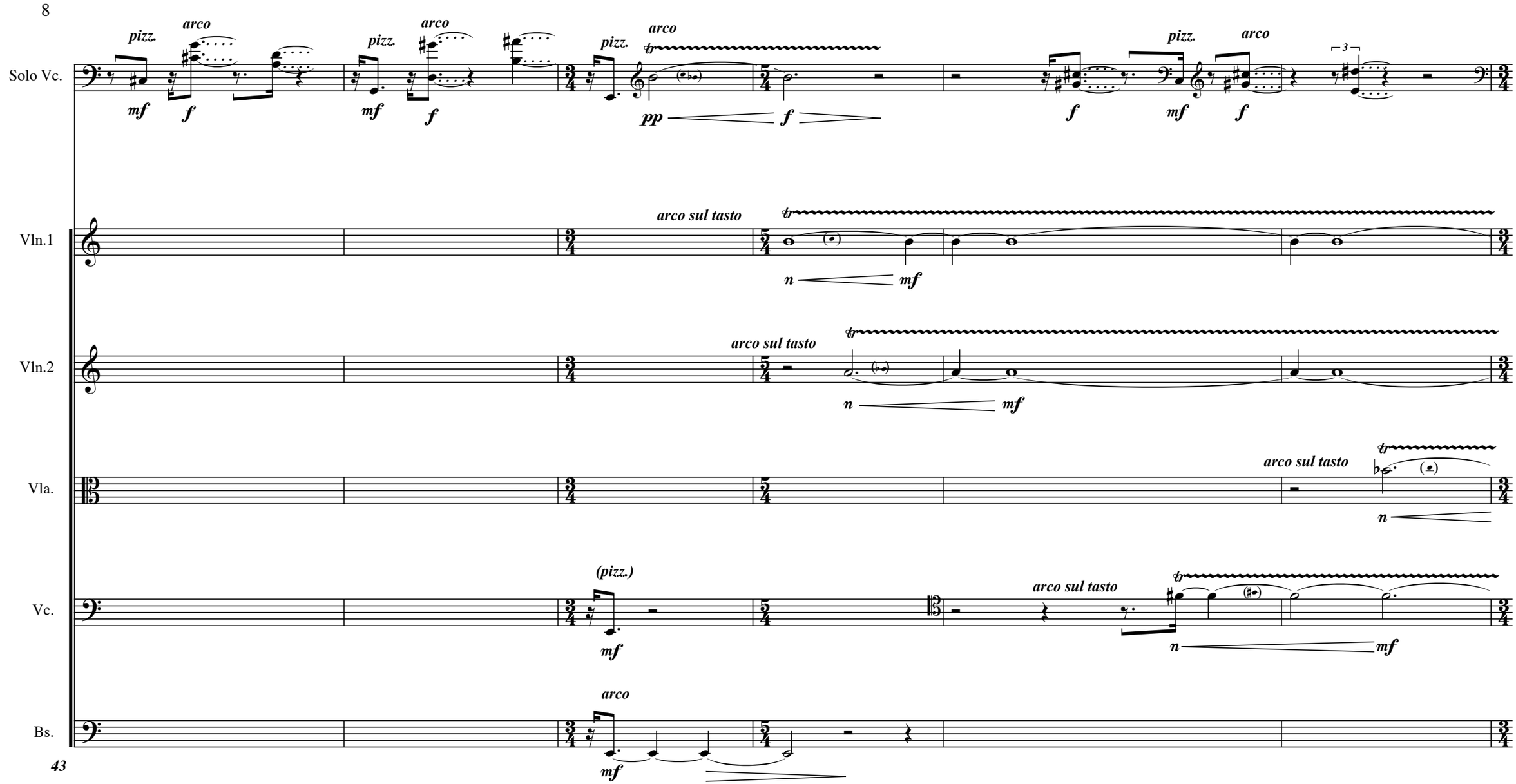

rit. . . . . ♩ = 60
rit. . . . . (♩ = 52)
Solo Vc.
pizz.
arco
pizz.
arco
Vln.1
arco div.
Vln.2
pizz.
arco div.
Vla.
pizz.
arco
Vc.
pizz.
arco
Bs.
pizz.
arco
15

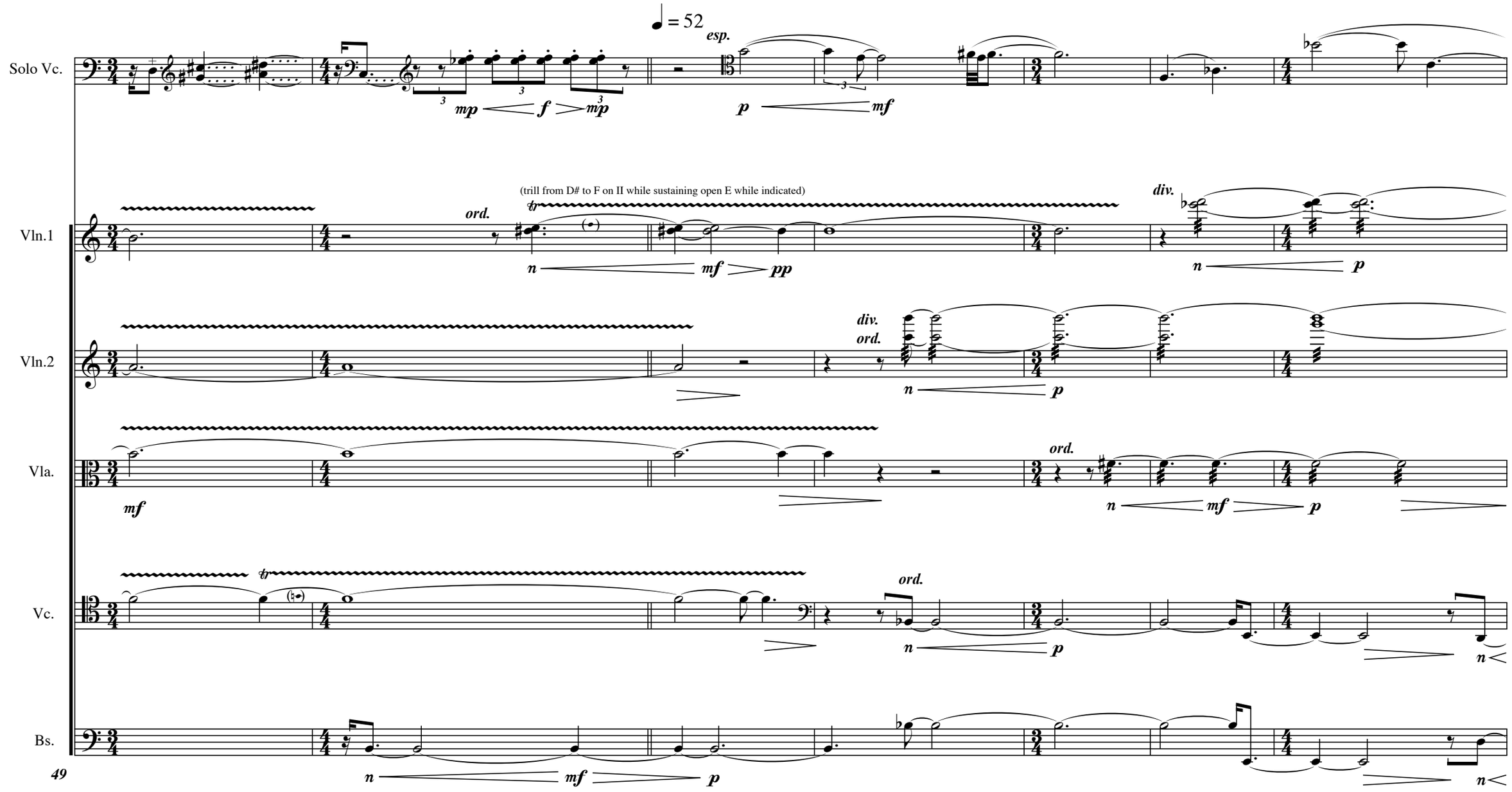

♩ = 52
accel. . . . . ♩ = 100
Solo Vc.
Vln.1
Vln.2
Vla.
Vc.
Bs.
21


Solo Vc.
Vln.1
Vln.2
Vla.
Vc.
Bs.
pizz.
ff
mf
27

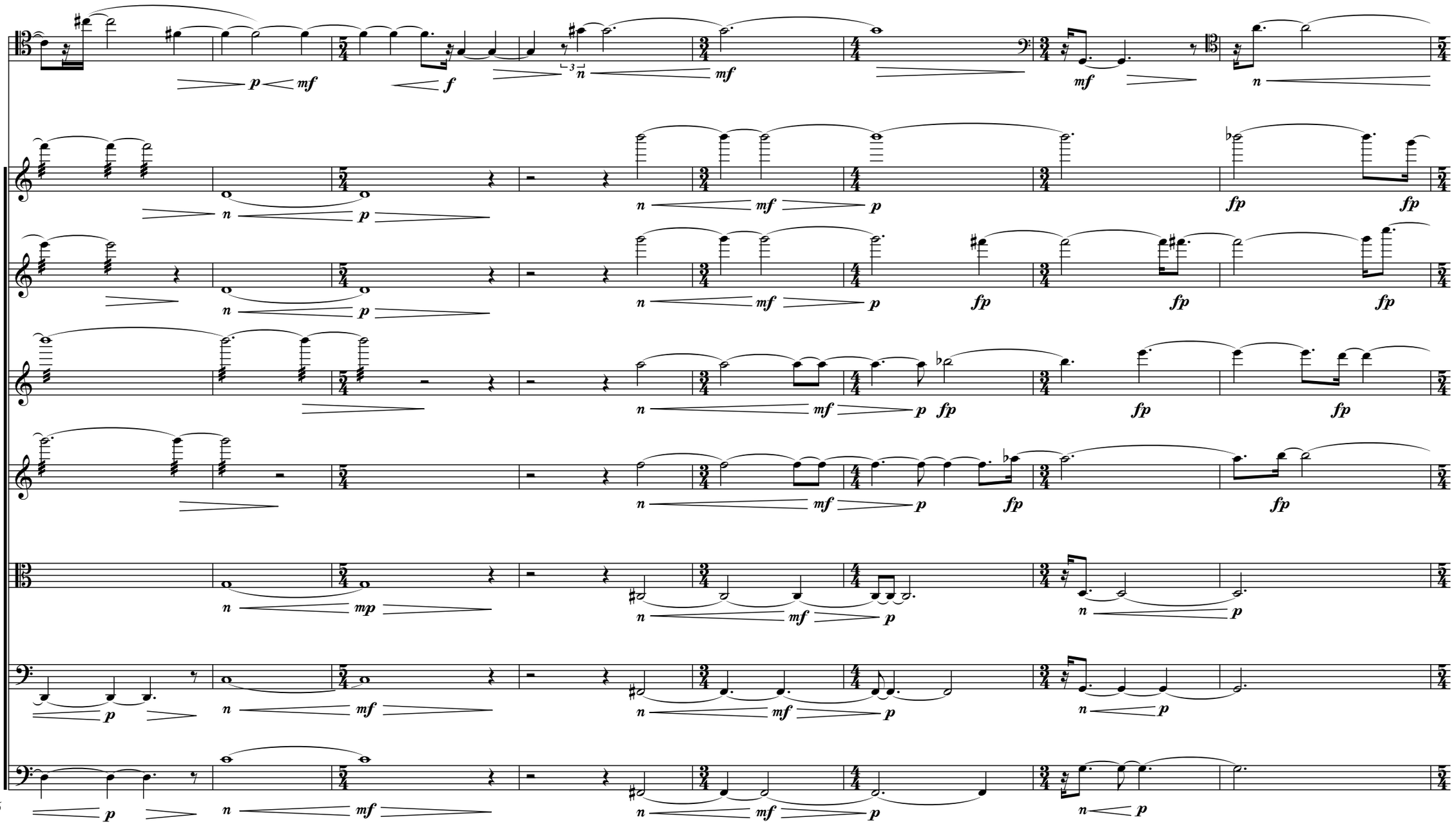

Solo Vc.
Vln.1
Vln.2
Vla.
Vc.
Bs.
mf
ff
p
ff
mf
ff
arco
n
arco
pp
arco
pp
arco
pp
32

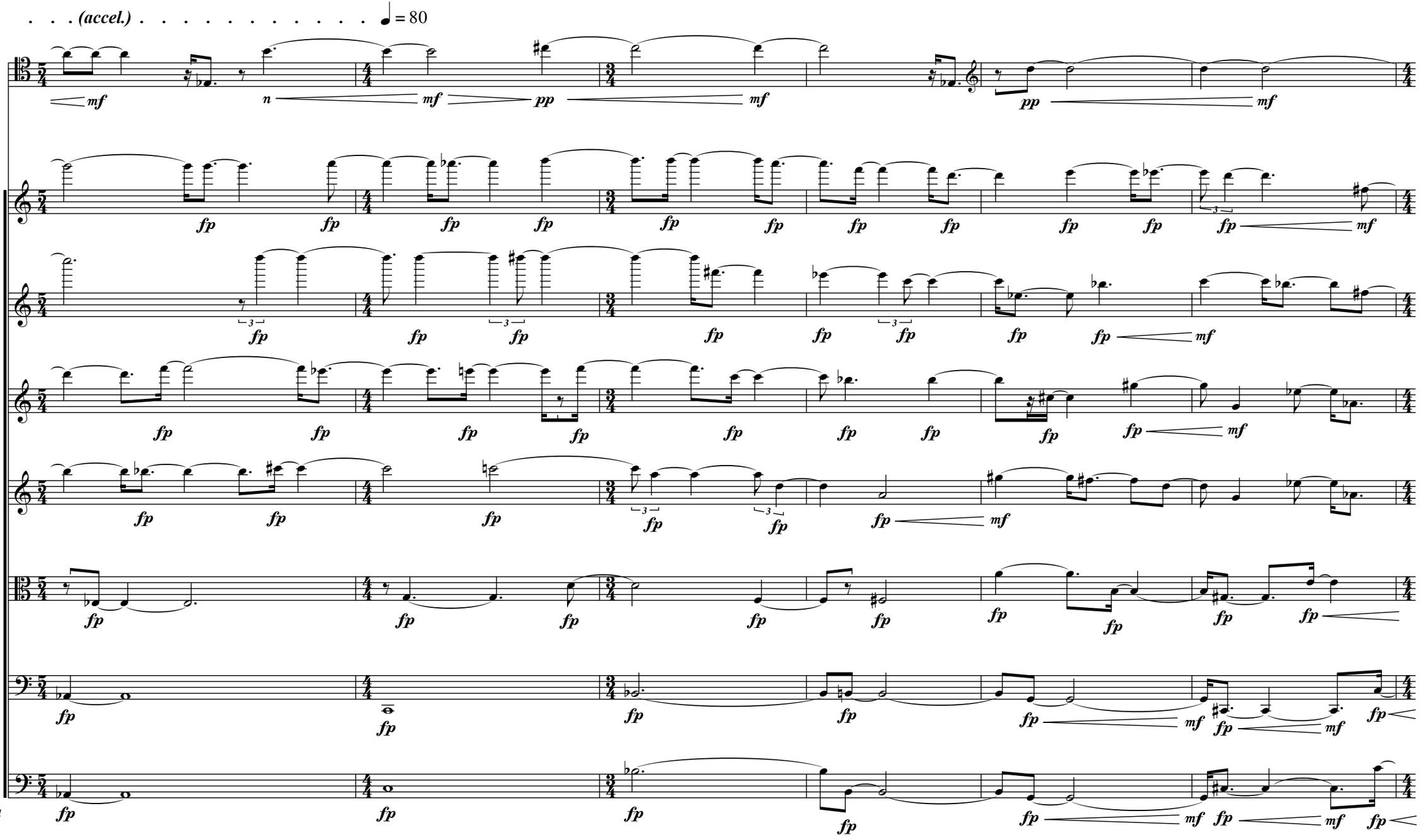

Solo Vc.
Vln.1
Vln.2
Vla.
Vc.
Bs.
♩ = 112
arco
div. pizz.
pizz.
38


Solo Vc.
Vln.1
Vln.2
Vla.
Vc.
Bs.
pizz.
arco
mf
f
pp
arco sul tasto
n
(pizz.)
3
43


♩ = 52
Solo Vc.
esp.
mp f mp
p mf
Vln.1
(trill from D# to F on II while sustaining open E while indicated)
ord.
tr
n mf pp
div.
n p
Vln.2
div.
ord.
n p
Vla.
mf
ord.
n mf p
Vc.
tr
ord.
n p
n
Bs.
n mf p
n
49

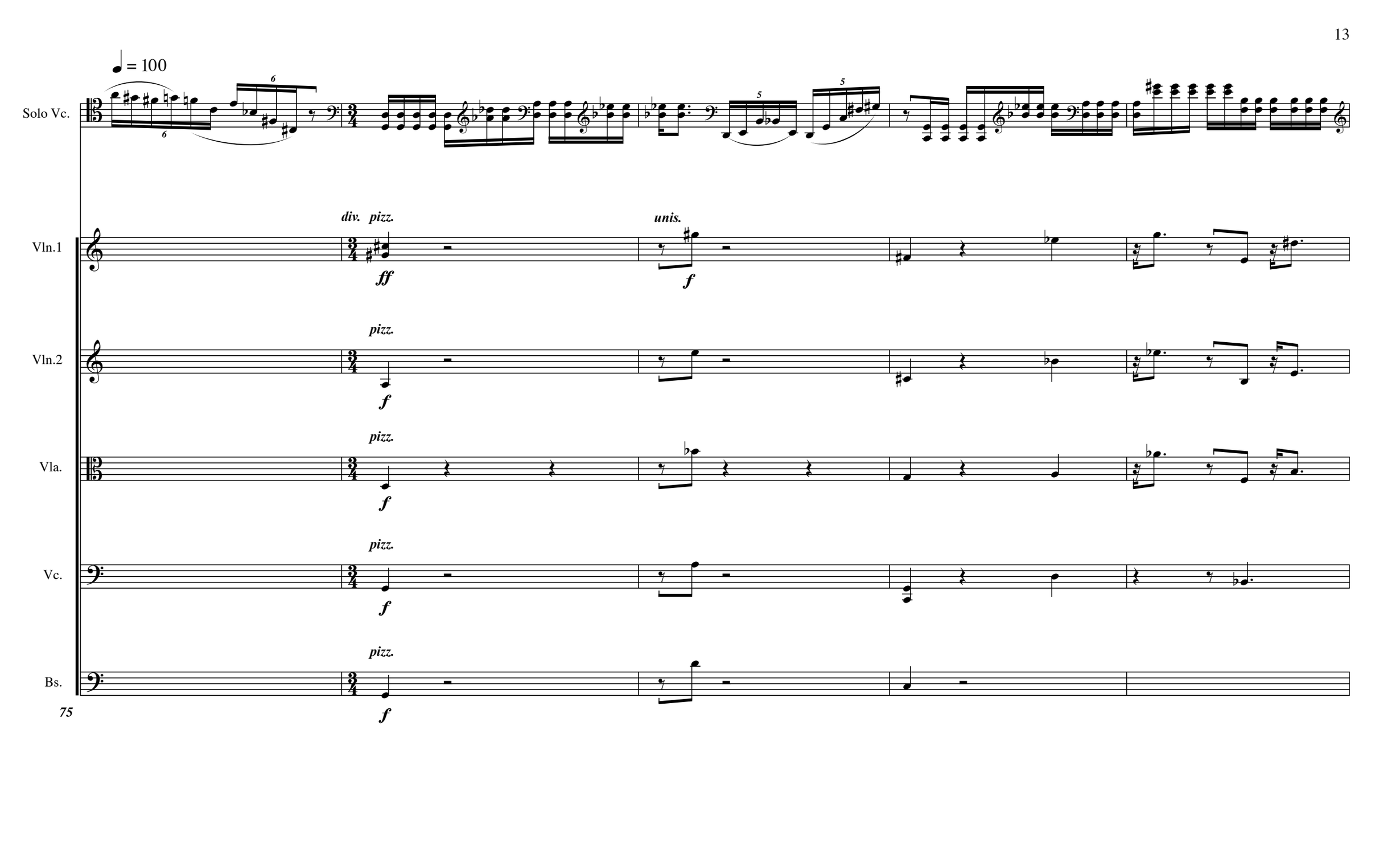
accel. . . . . . .

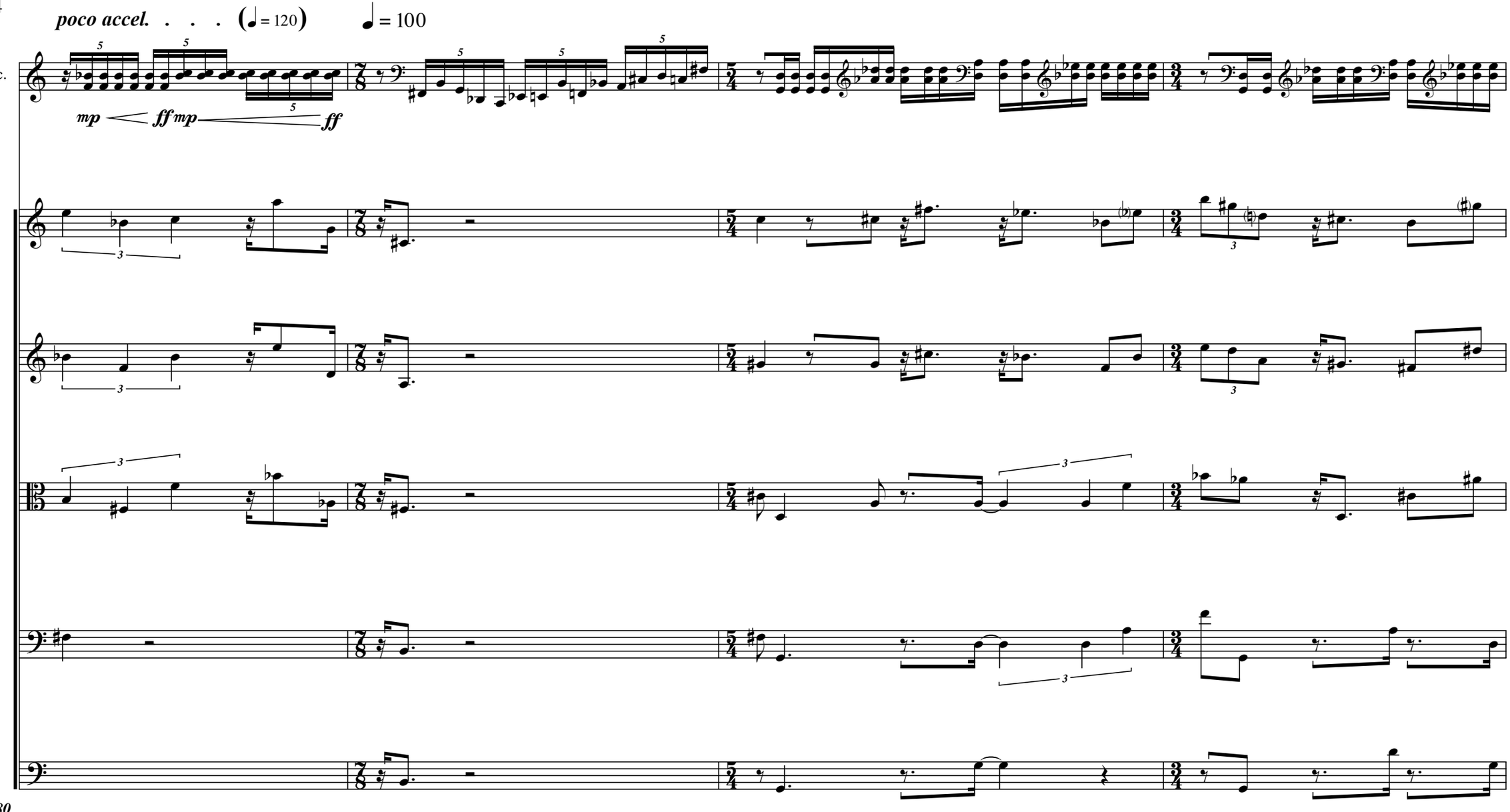


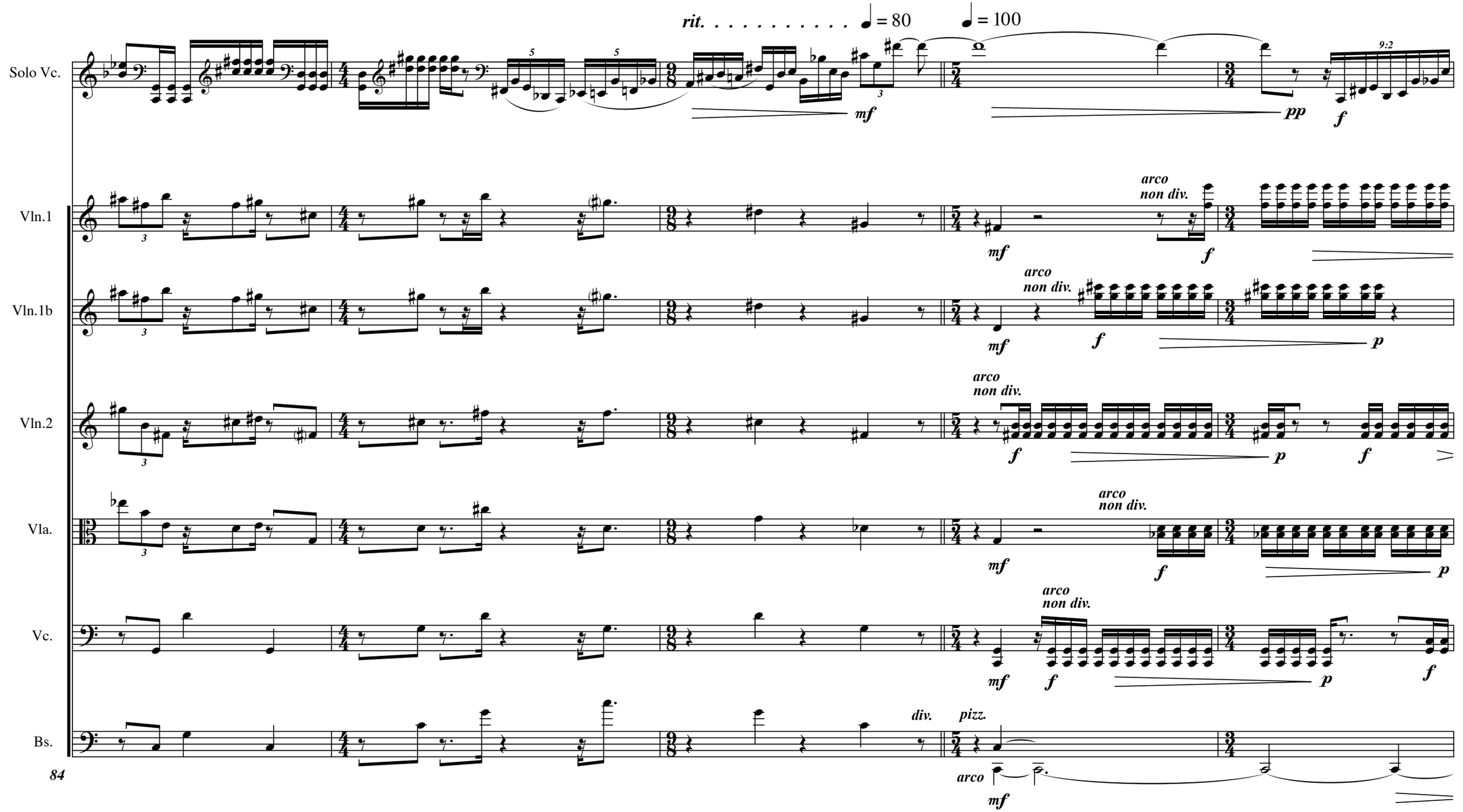

. . . (accel.) . . . . . ♩ = 80
Solo Vc.
Vln.1
Vln.1b
Vln.2
Vln.2b
Vla.
Vc.
Bs.
64

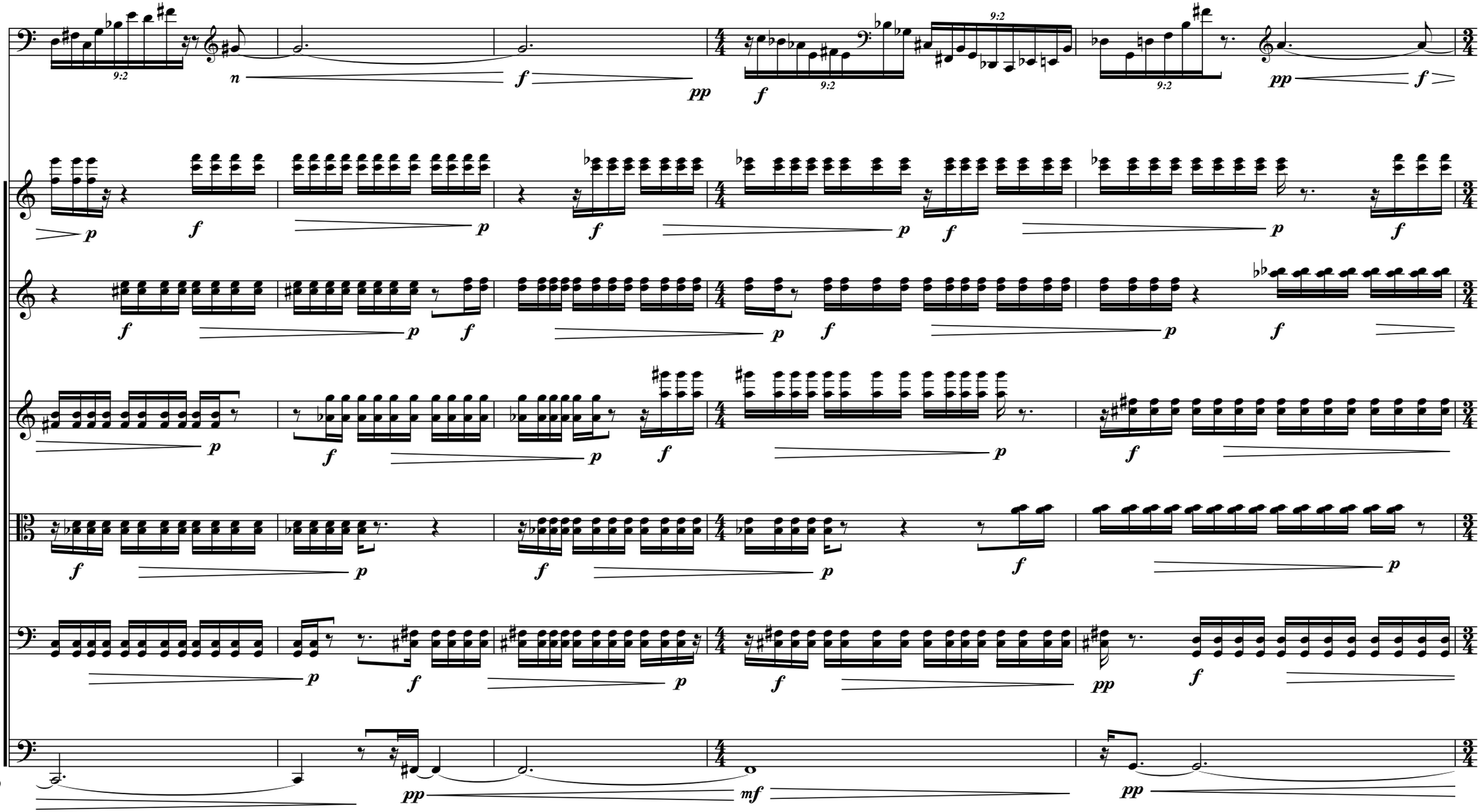
accel. . . . . (♩ = 100)

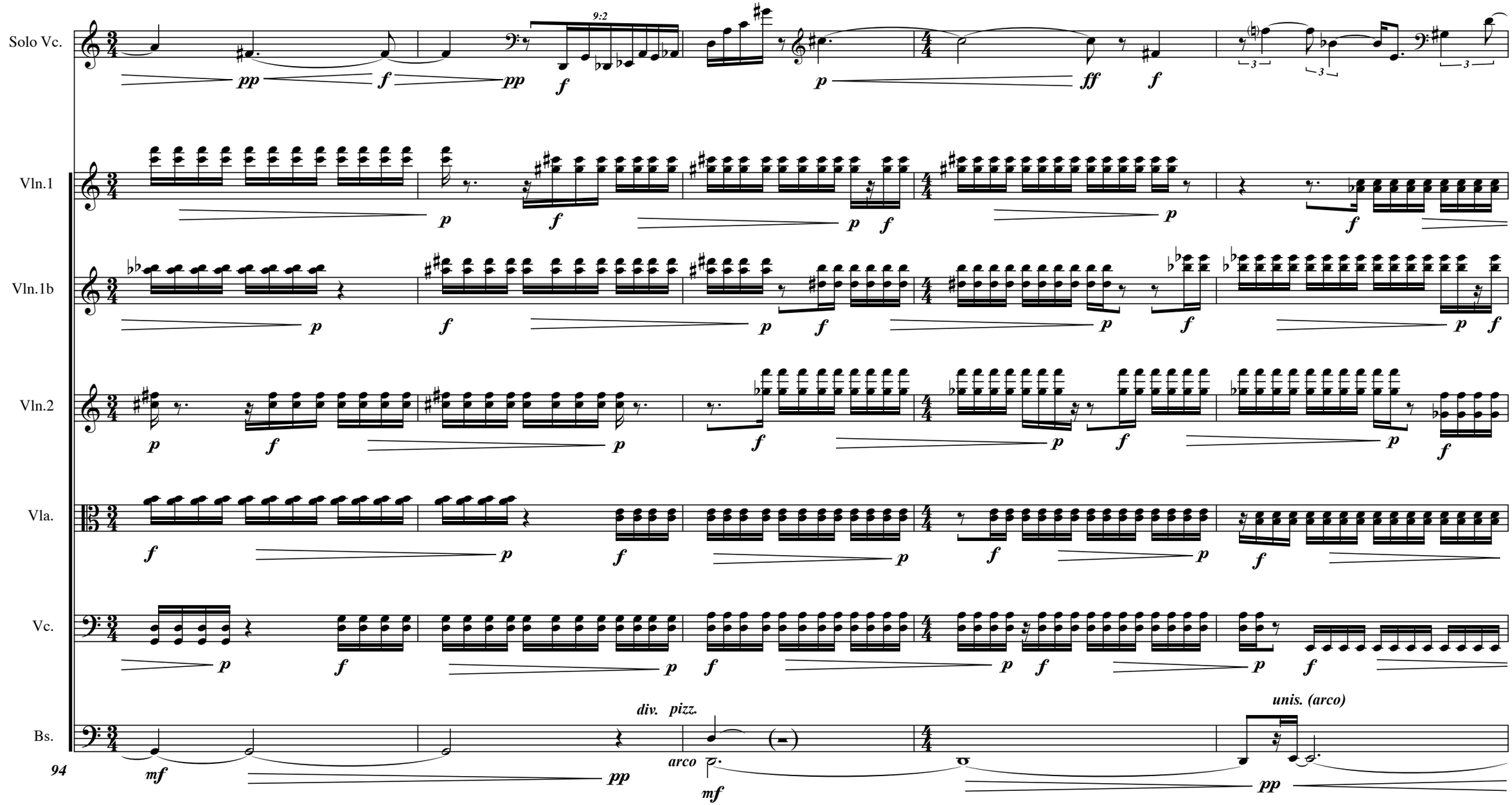
Solo Vc.
Vln.1
Vln.2
Vla.
Vc.
Bs.
(unis.)
(unis.)
ff
fff
fff
fff
mf
fff
fp
mf
f
ff
fff

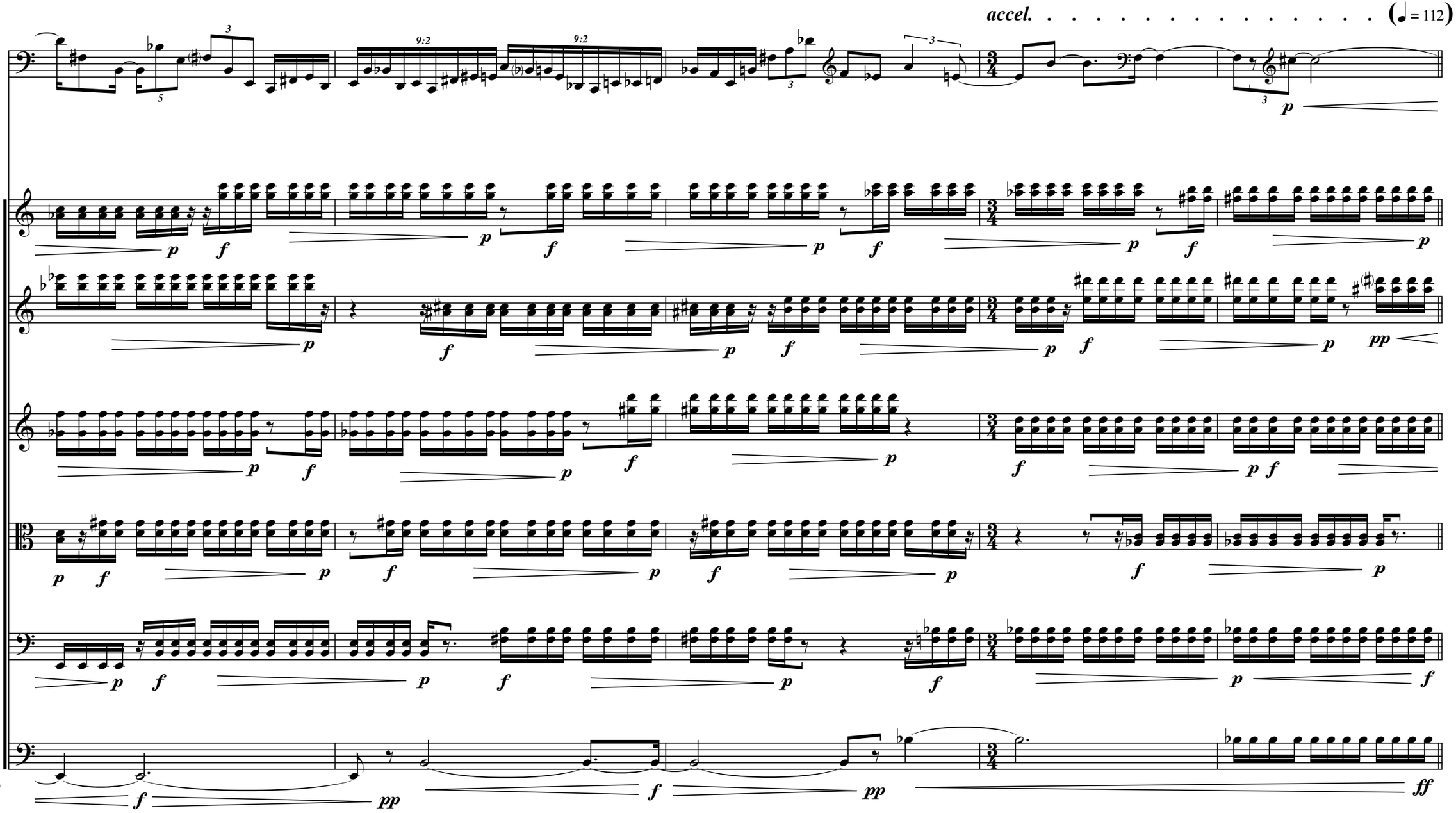

♩ = 100
Solo Vc.
Vln.1
Vln.2
Vla.
Vc.
Bs.
div. pizz.
unis.
pizz.
ff
f
75

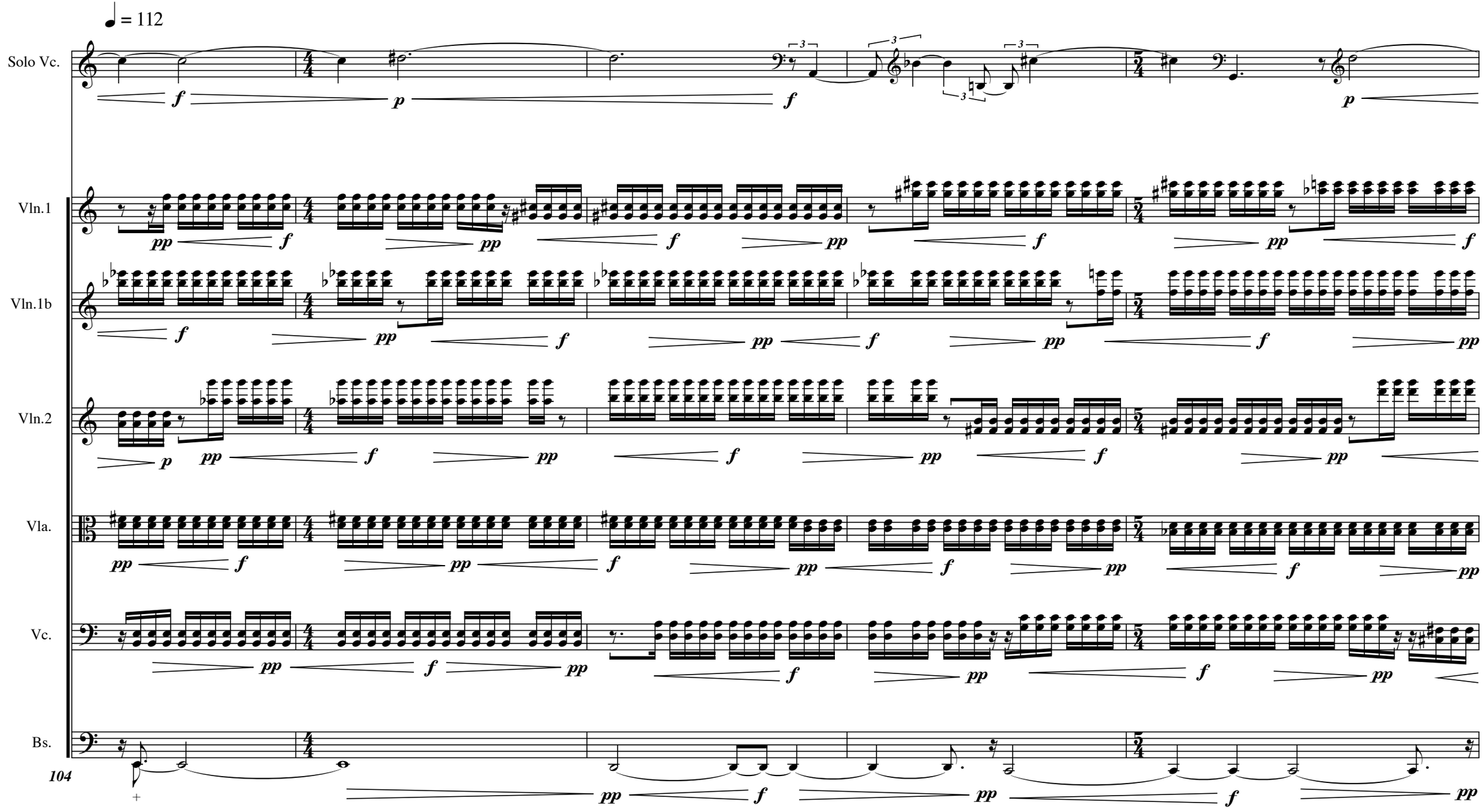

poco accel. . . . (♩= 120)
♩= 100
Solo Vc.
mp
ff mp
ff
Vln.1
Vln.2
Vla.
Vc.
Bs.

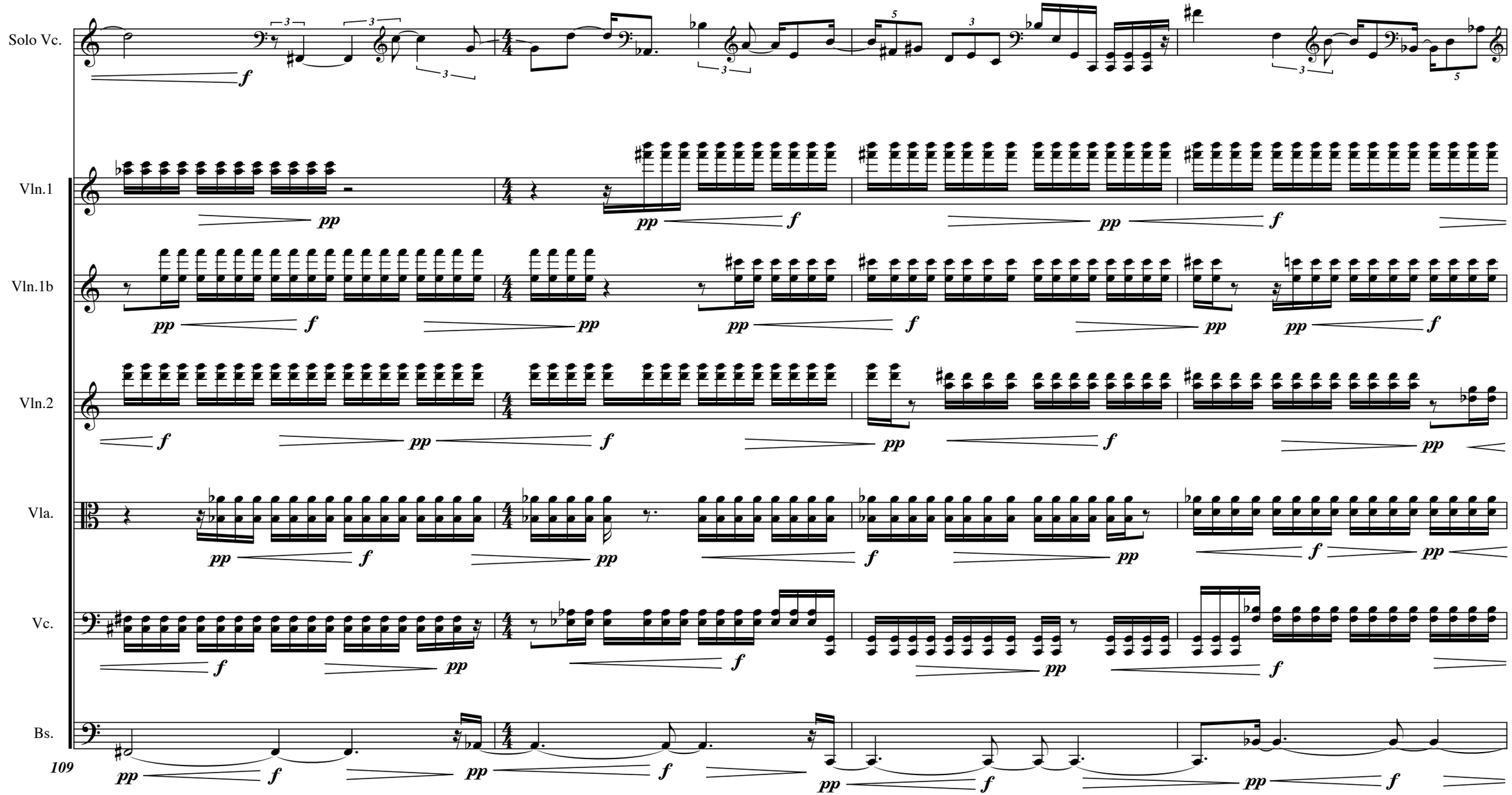

rit. . . . . ♩ = 80
♩ = 100
Solo Vc.
Vln.1
Vln.1b
Vln.2
Vla.
Vc.
Bs.
arco
non div.
div.
pizz.
arco
84

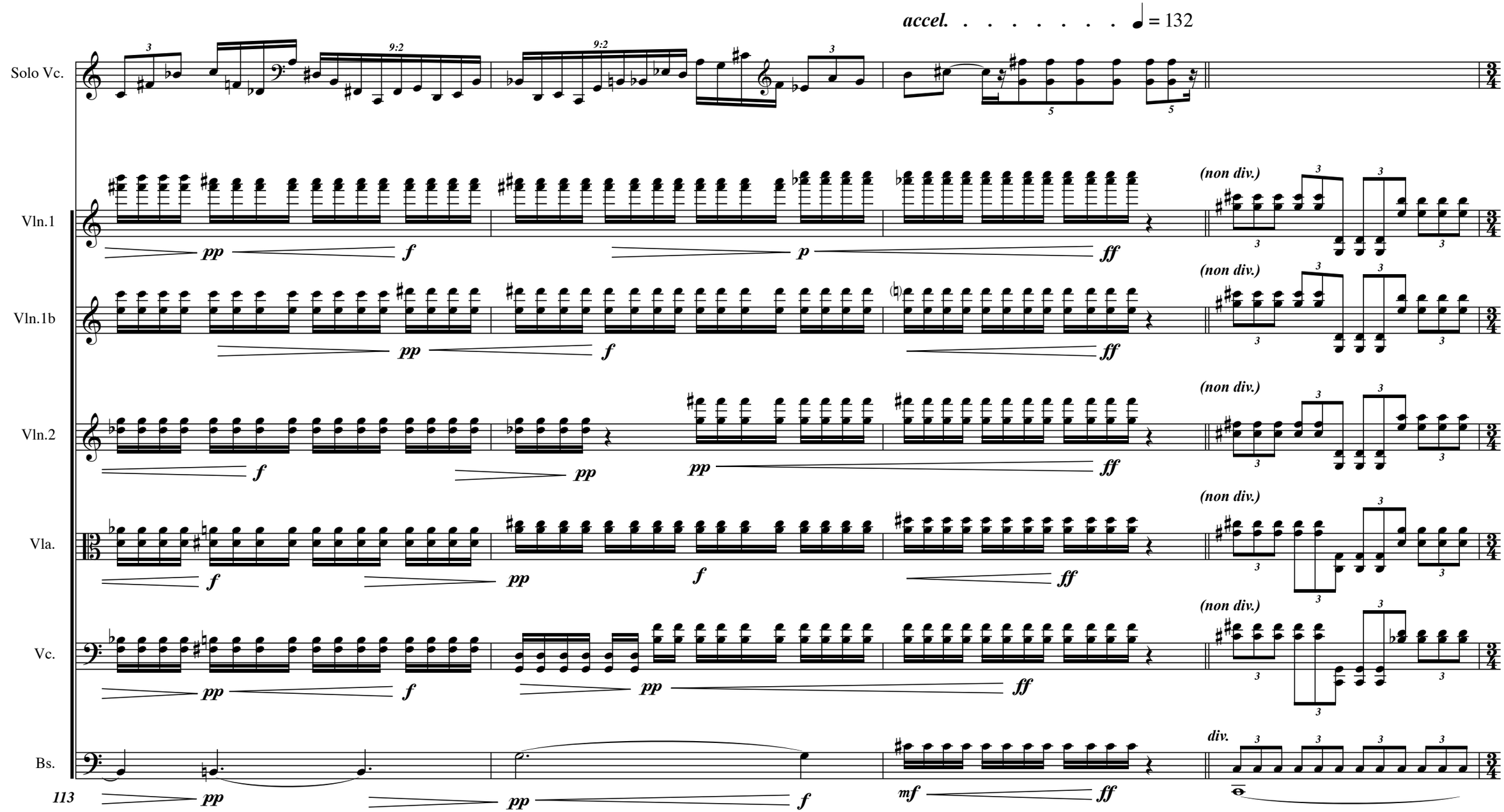

Solo Vc.
Vln.1
Vln.1b
Vln.2
Vla.
Vc.
Bs.
89

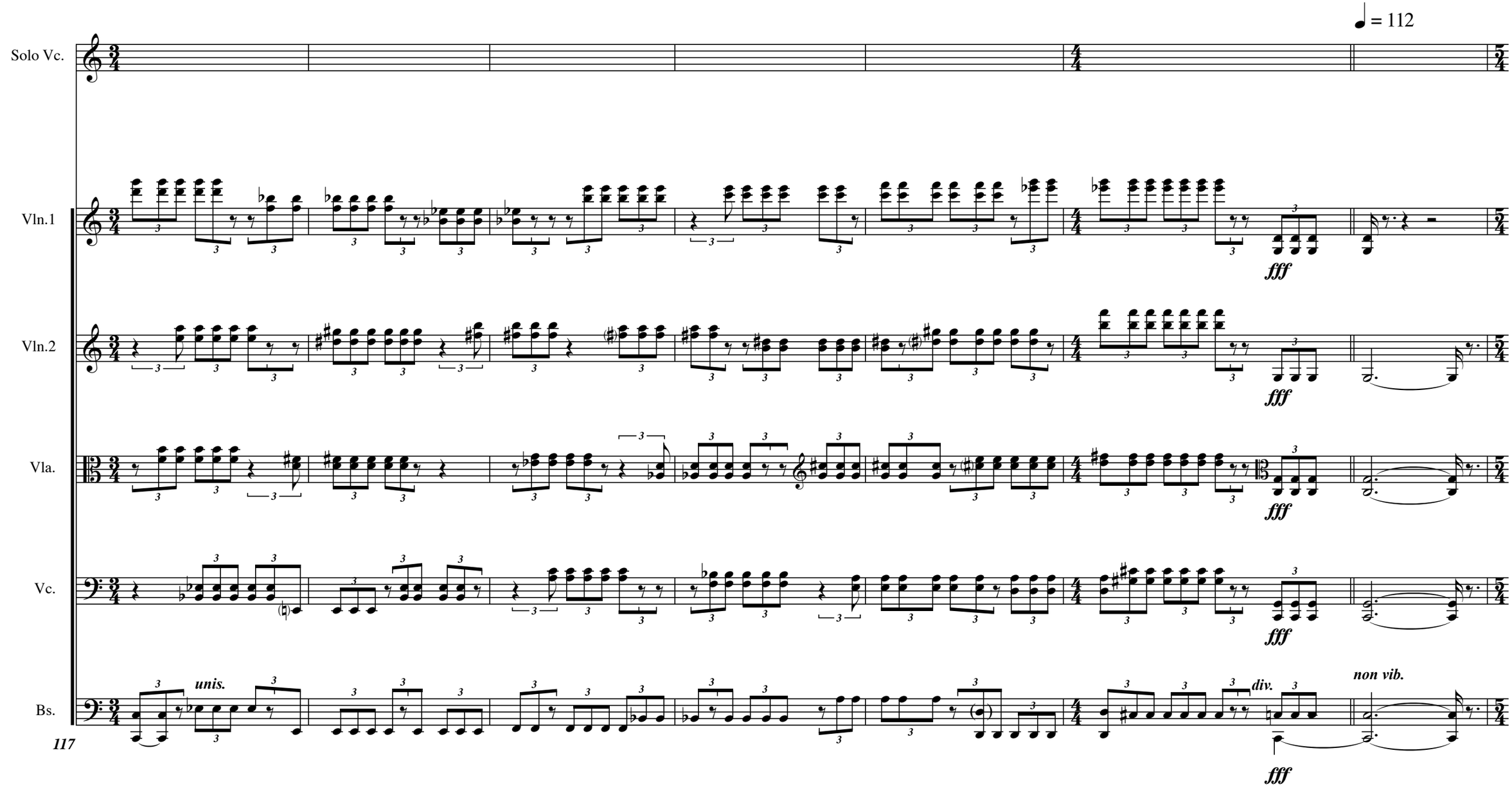

Solo Vc.
Vln.1
Vln.1b
Vln.2
Vla.
Vc.
Bs.
9:2
div. pizz.
arco
unis. (arco)
94

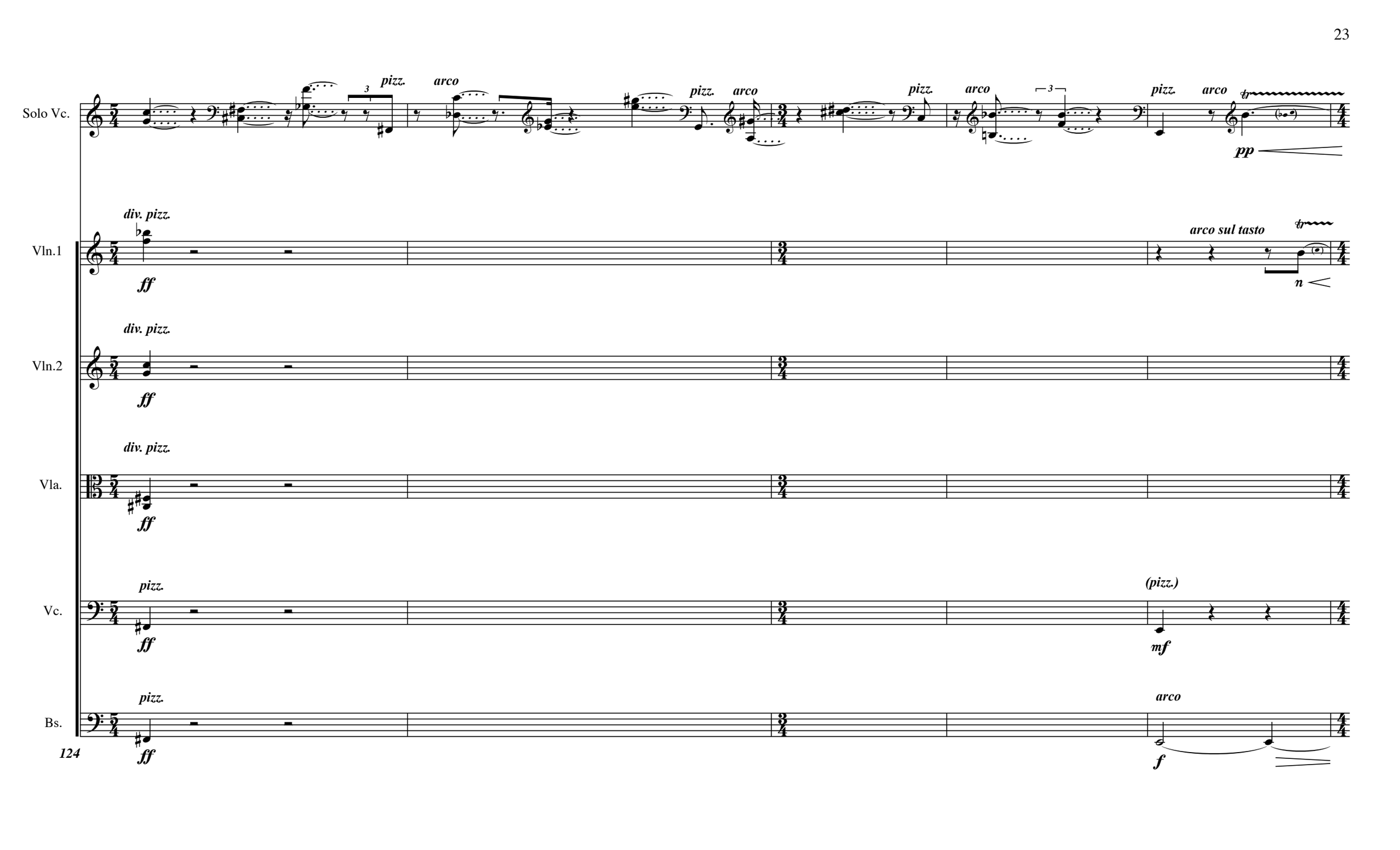

accel.
(♩ = 112)
Solo Vc.
Vln.1
Vln.1b
Vln.2
Vla.
Vc.
Bs.
99

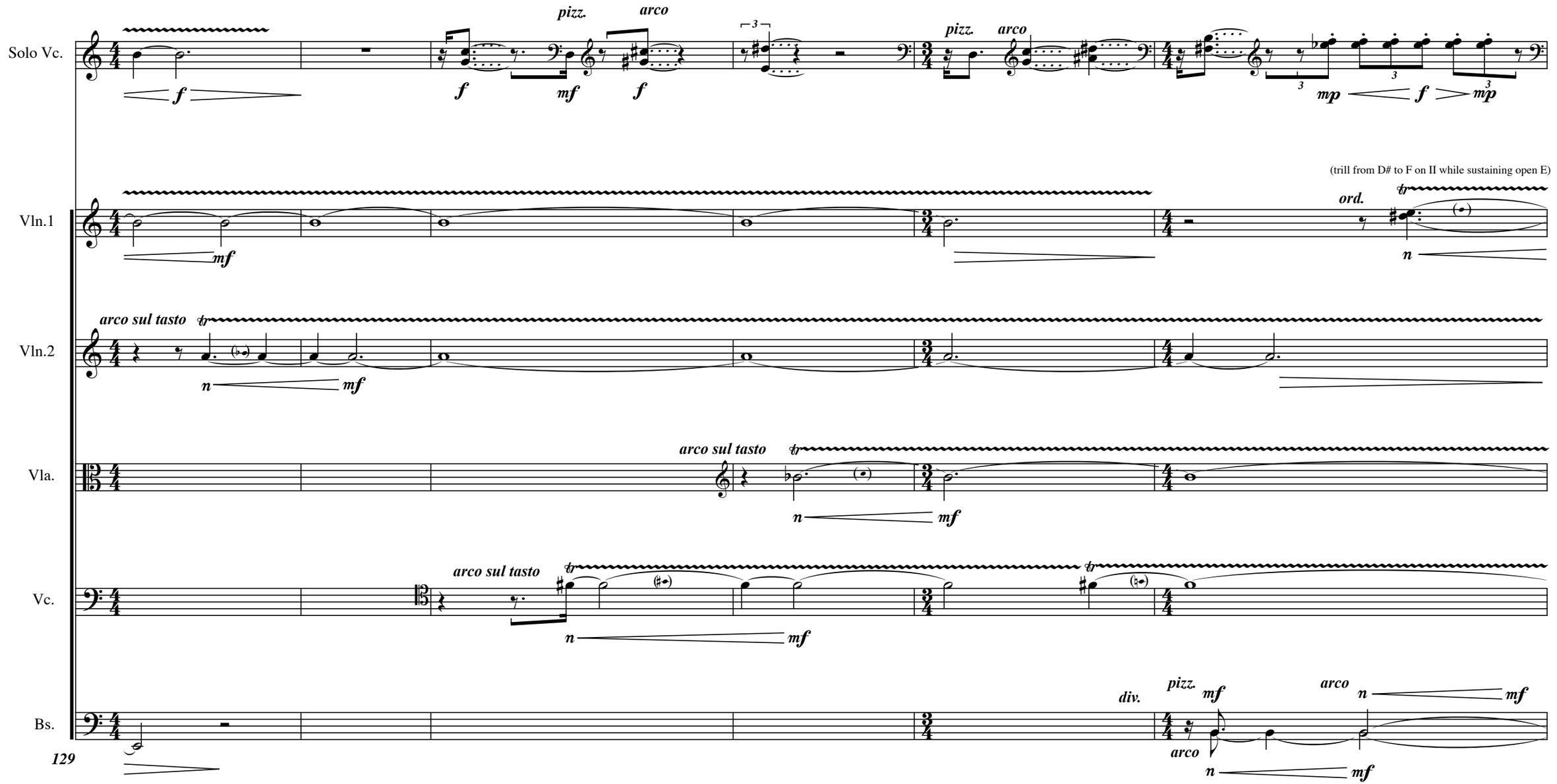

♩ = 112
Solo Vc.
Vln.1
Vln.1b
Vln.2
Vla.
Vc.
Bs.
104

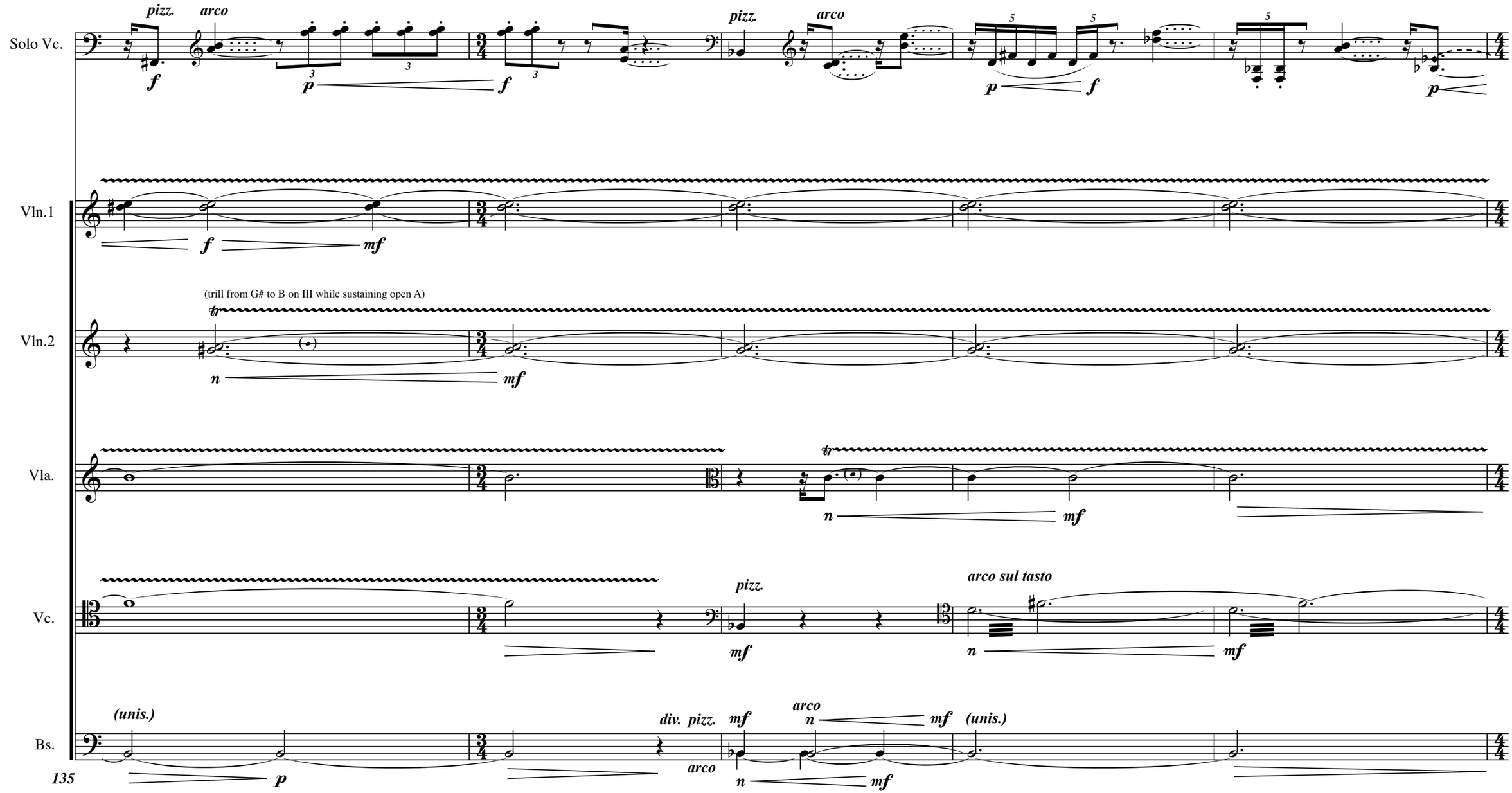

Solo Vc.
Vln.1
Vln.1b
Vln.2
Vla.
Vc.
Bs.
109

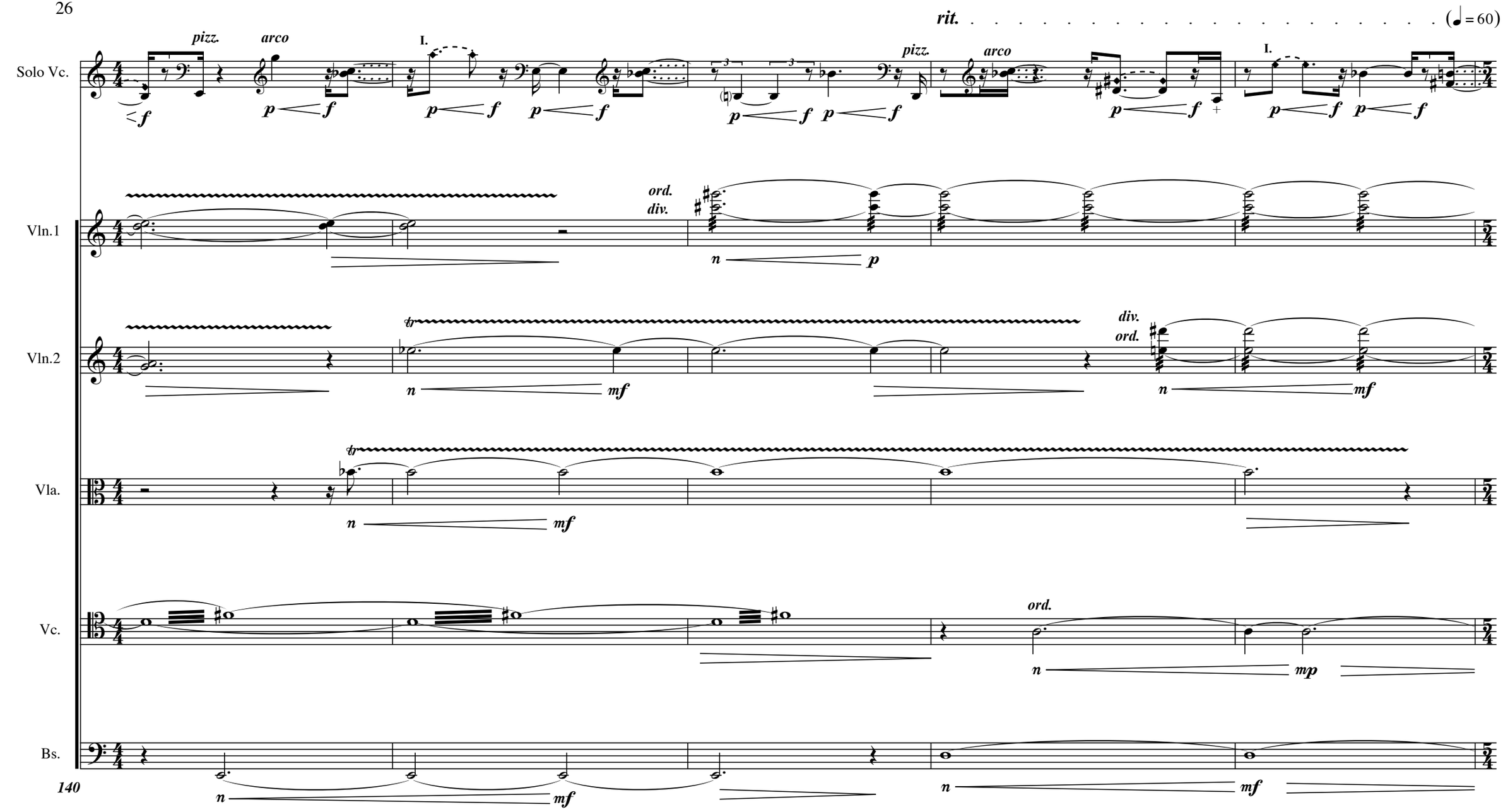

accel. . . . . ♩ = 132
Solo Vc.
Vln.1
Vln.1b
Vln.2
Vla.
Vc.
Bs.
(non div.)
div.
pp
f
p
ff
mf
113

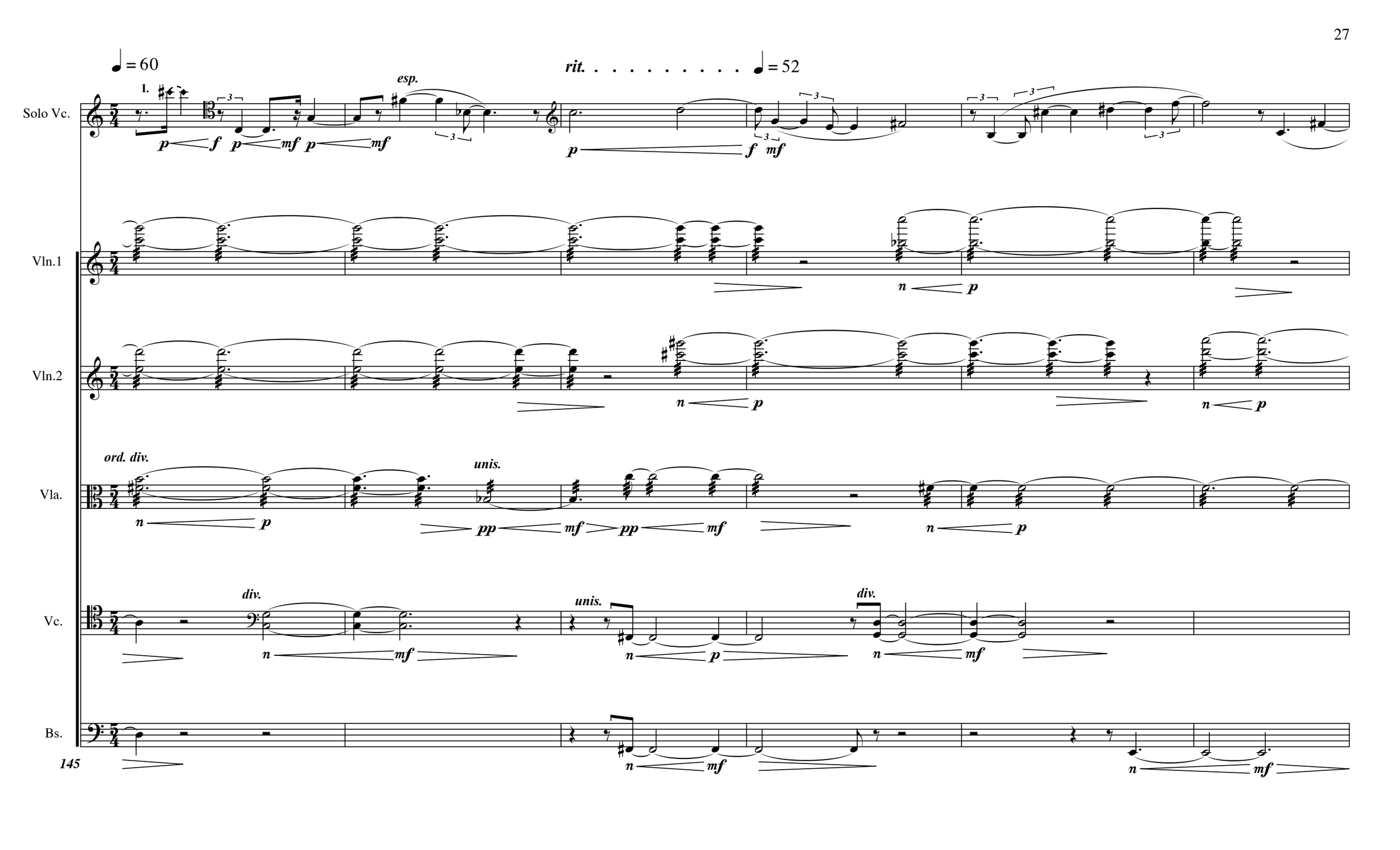

♩ = 112
Solo Vc.
Vln.1
Vln.2
Vla.
Vc.
Bs.
fff
unis.
div.
non vib.
117

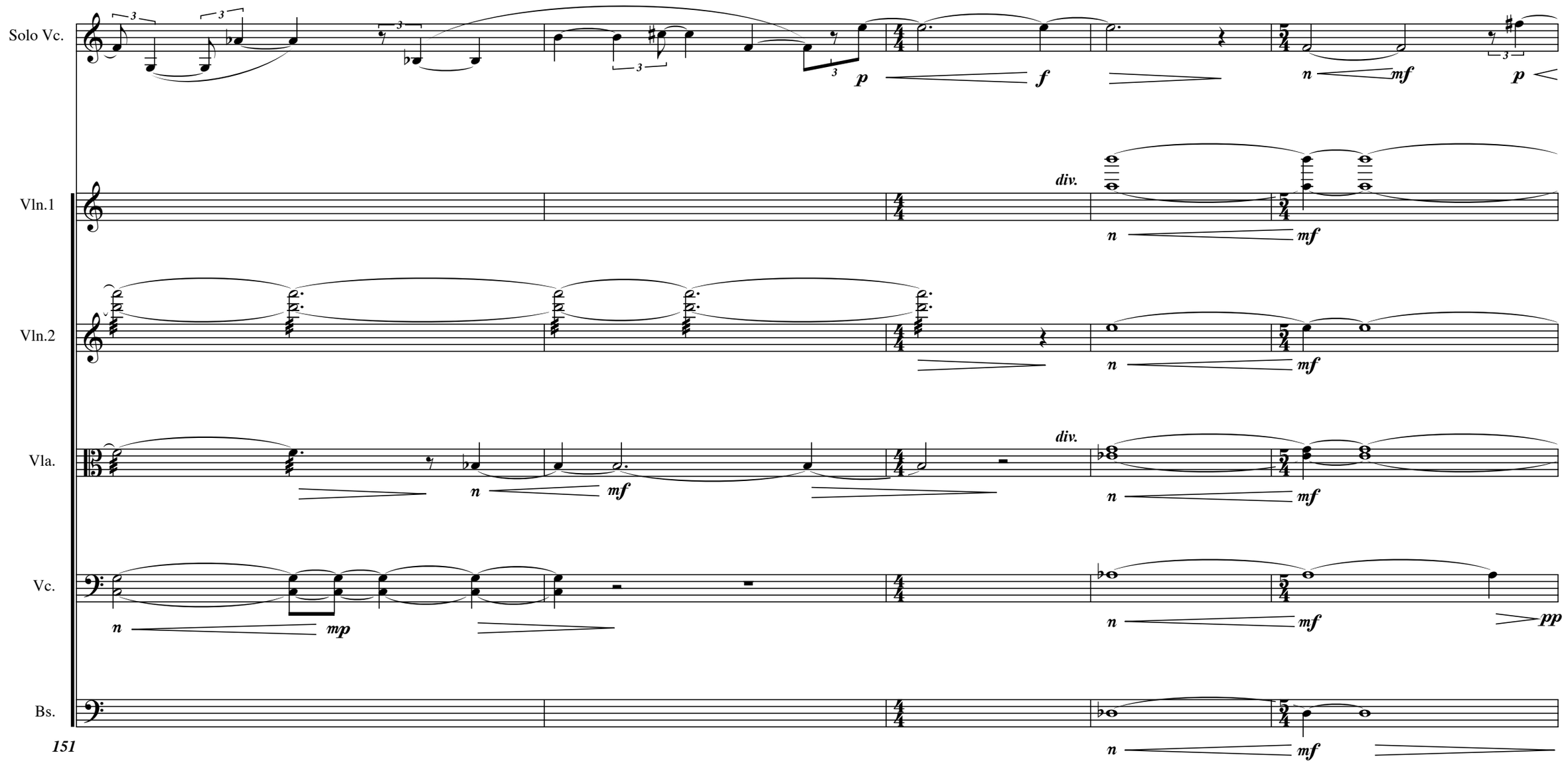

Solo Vc.
pizz.
arco
pizz.
arco
pizz.
arco
pizz.
arco
pp
Vln.1
div. pizz.
ff
arco sul tasto
n
Vln.2
div. pizz.
ff
Vla.
div. pizz.
ff
Vc.
pizz.
ff
(pizz.)
mf
Bs.
pizz.
ff
arco
f
124


Solo Vc.
Vln.1
Vln.2
Vla.
Vc.
Bs.
pizz.
arco
(trill from D# to F on II while sustaining open E)
ord.
arco sul tasto
div.
129

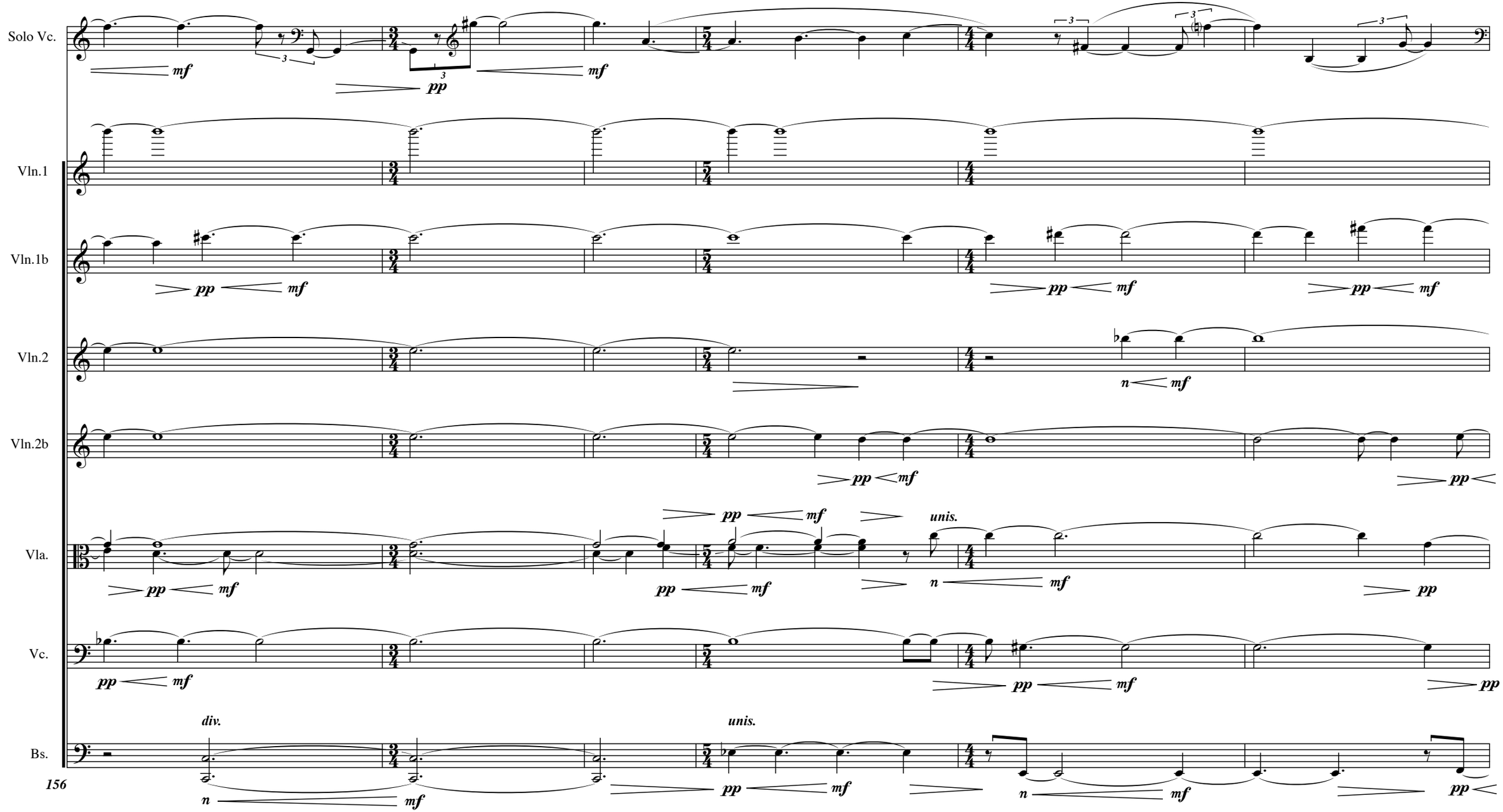

Solo Vc.
Vln.1
Vln.2
Vla.
Vc.
Bs.
pizz.
arco
(trill from G# to B on III while sustaining open A)
arco sul tasto
(unis.)
div. pizz.
135

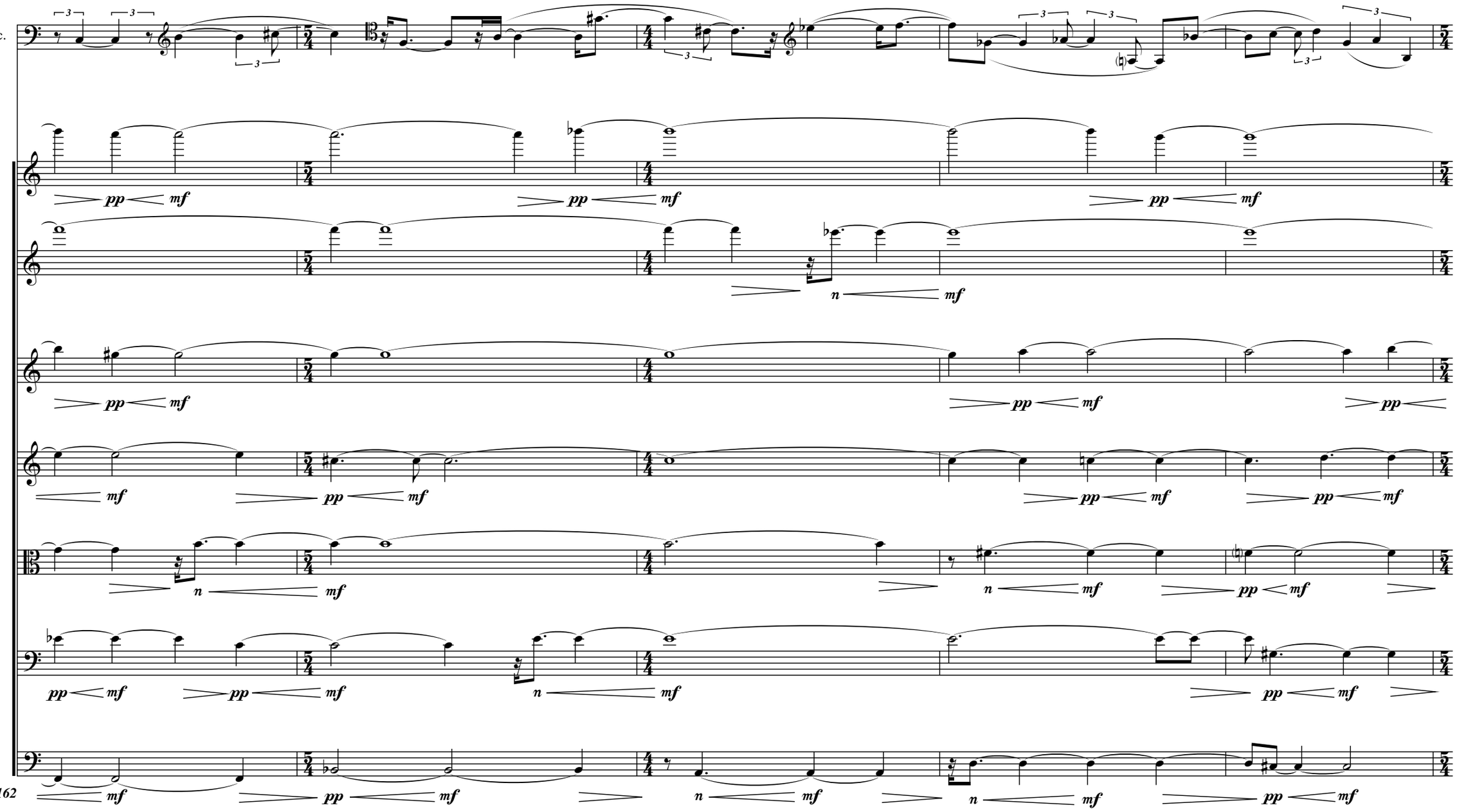

rit.
(♩= 60)
Solo Vc.
Vln.1
Vln.2
Vla.
Vc.
Bs.
pizz.
arco
I.
ord.
div.
tr
n
p
f
mf
mp
140

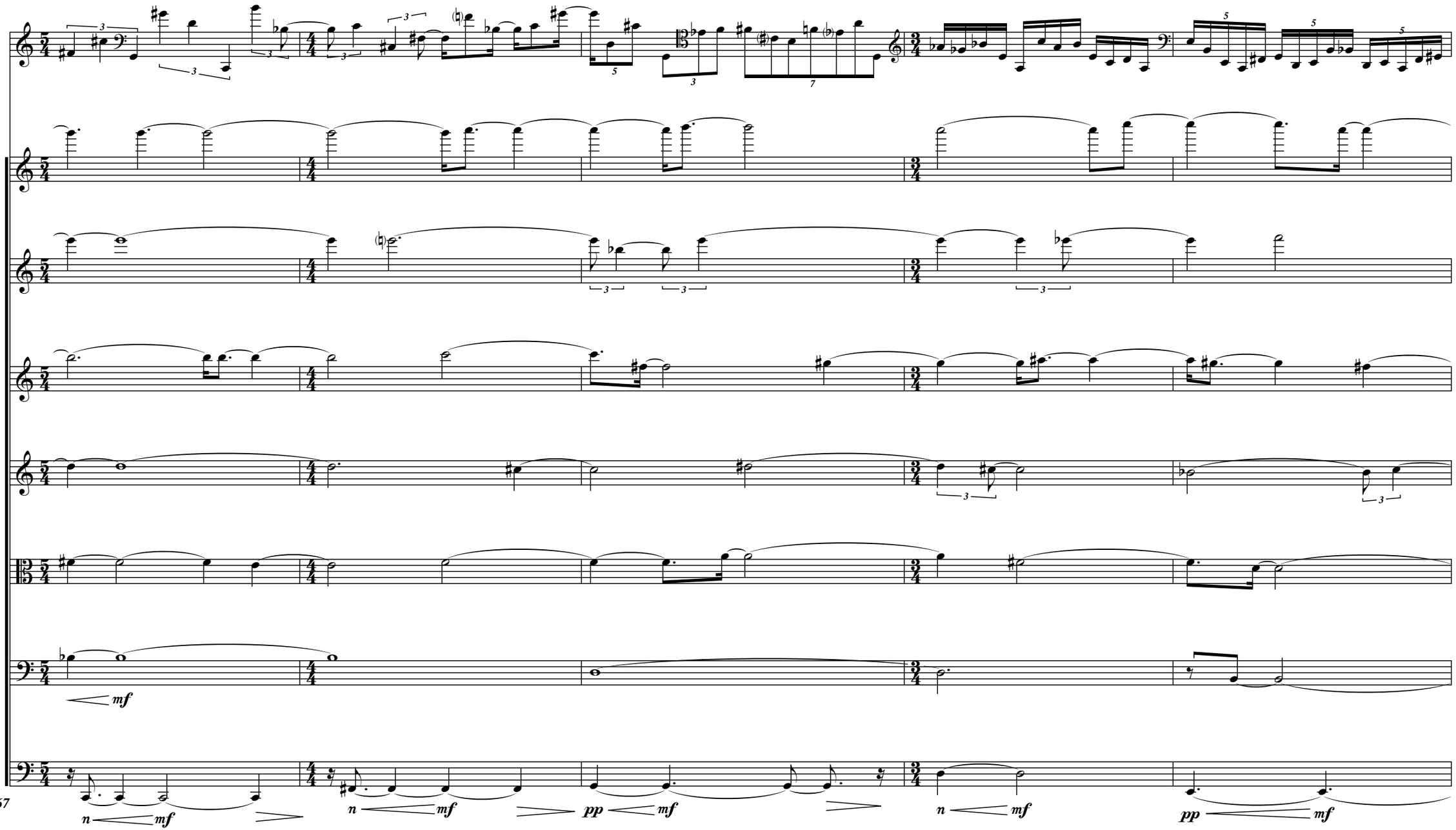

♩ = 60
I.
esp.
rit. . . . . ♩ = 52
Solo Vc.
Vln.1
Vln.2
Vla.
Vc.
Bs.
ord. div.
unis.
div.
145

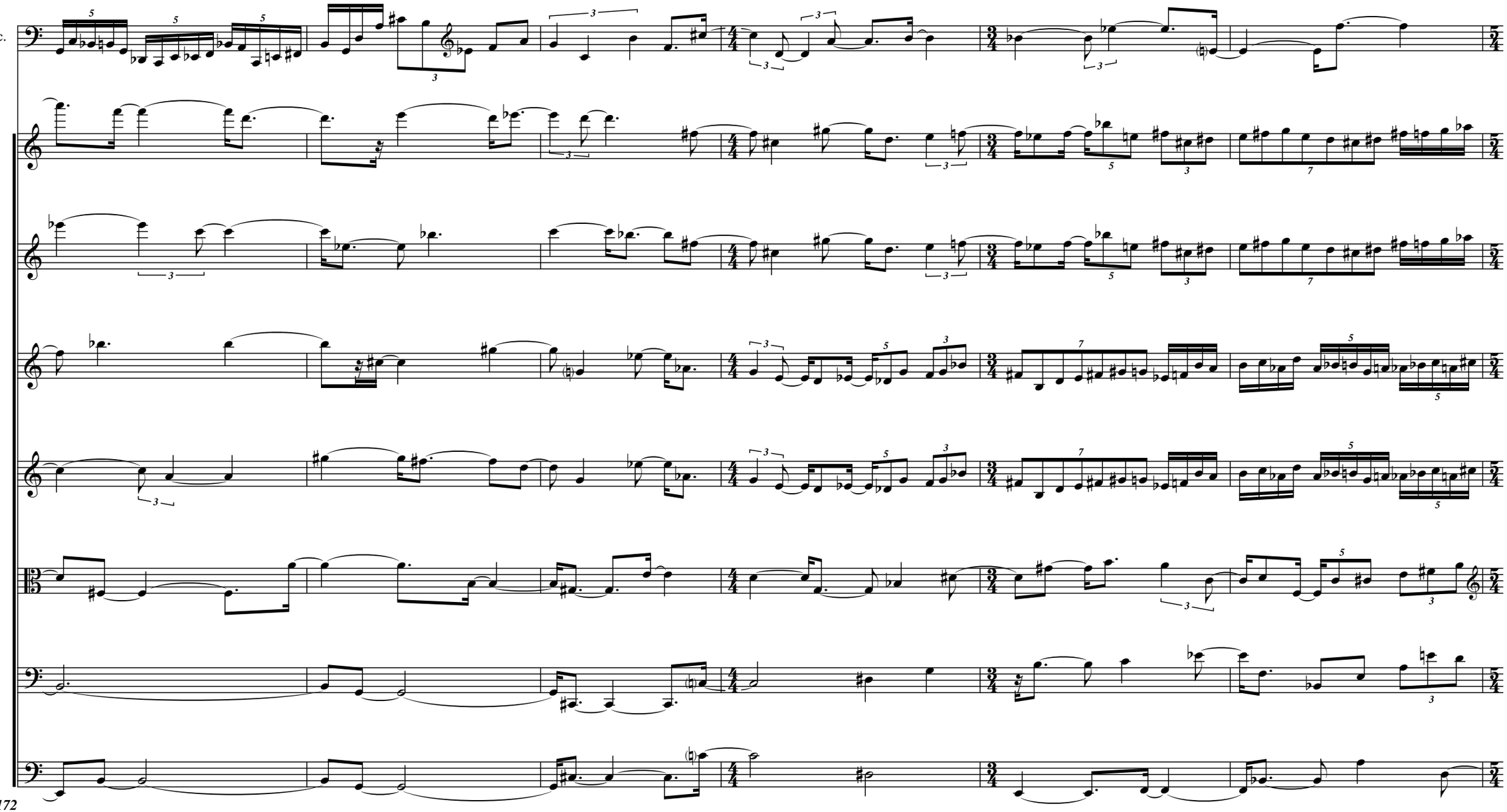

Solo Vc.
Vln.1
Vln.2
Vla.
Vc.
Bs.
div.
div.
p
f
n
mf
p
n
mf
n
mf
n
mf
n
mp
n
mf
pp
n
mf

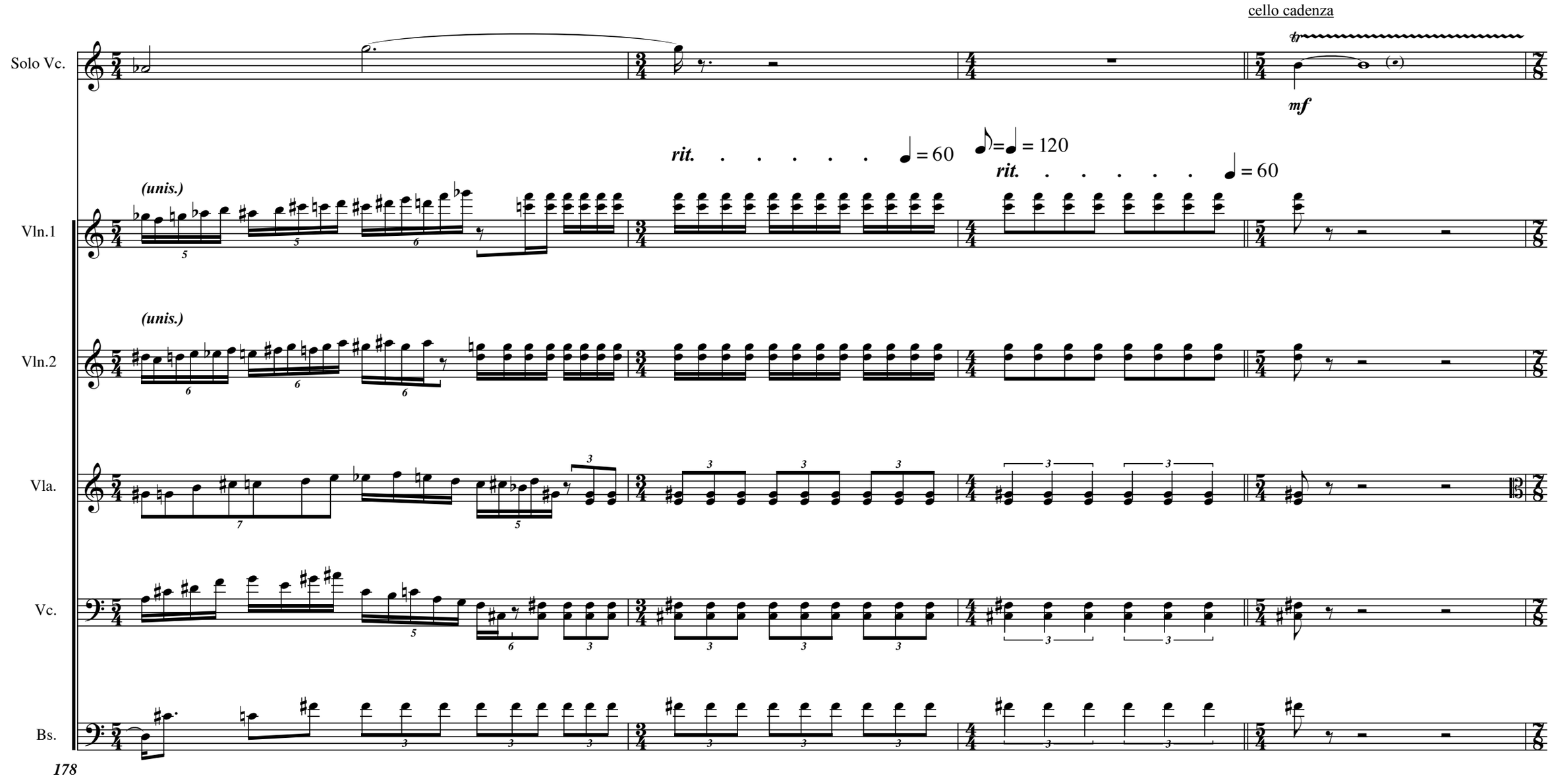
151

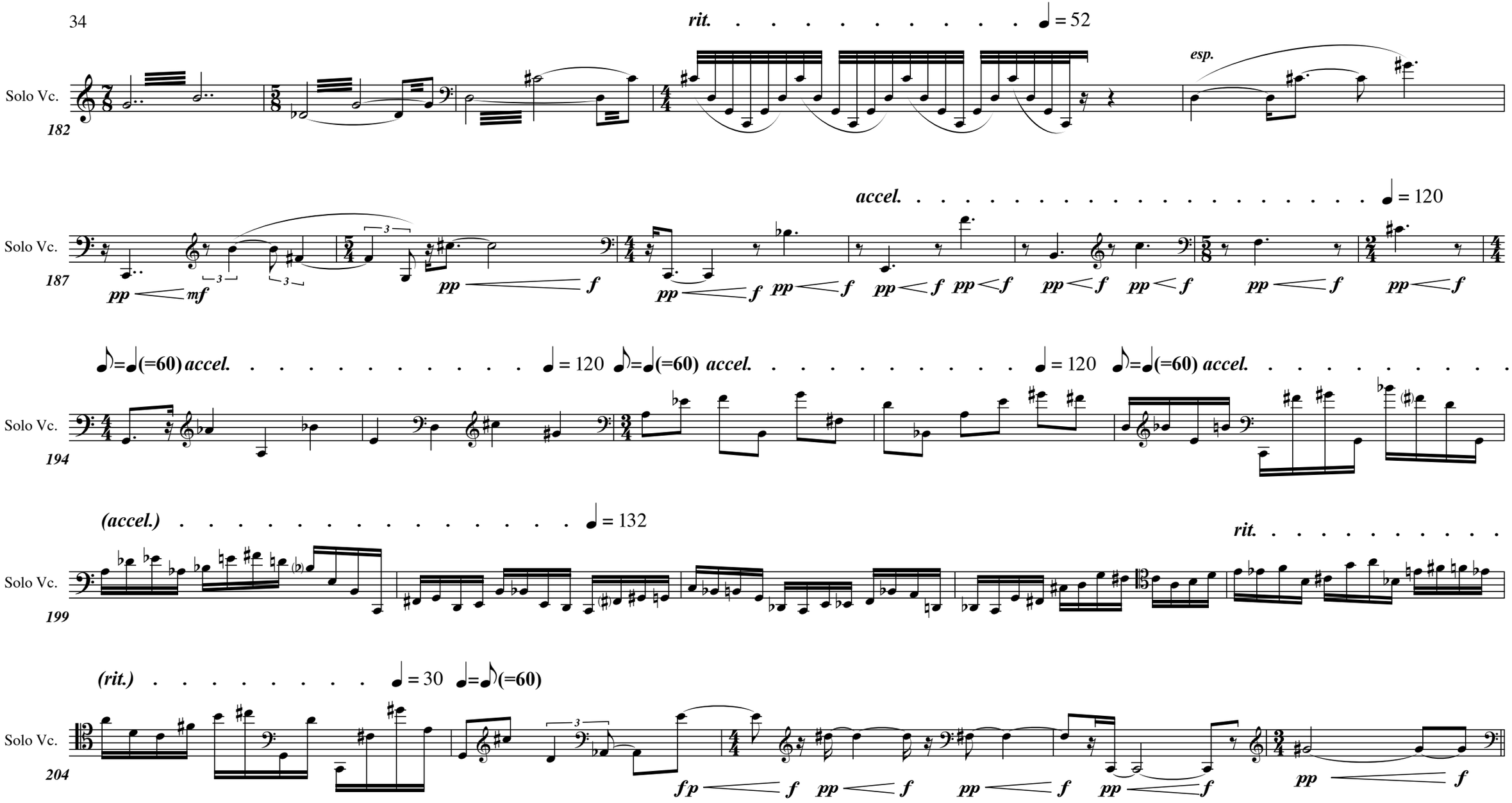

Solo Vc.
Vln.1
Vln.1b
Vln.2
Vln.2b
Vla.
Vc.
Bs.
mf
pp
unis.
div.
156

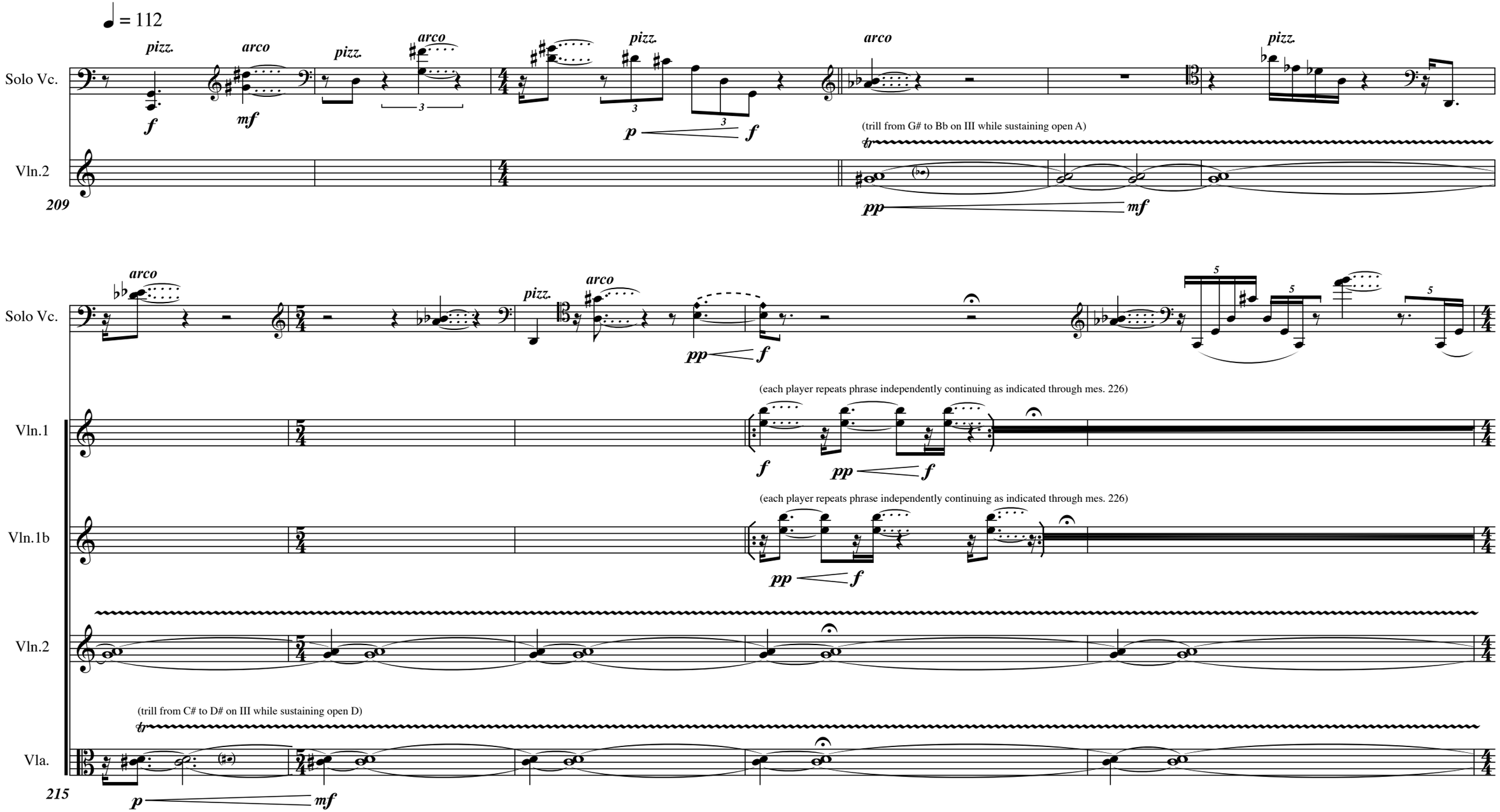

Solo Vc.
Vln.1
Vln.1b
Vln.2
Vln.2b
Vla.
Vc.
Bs.
pp mf
n mf
162

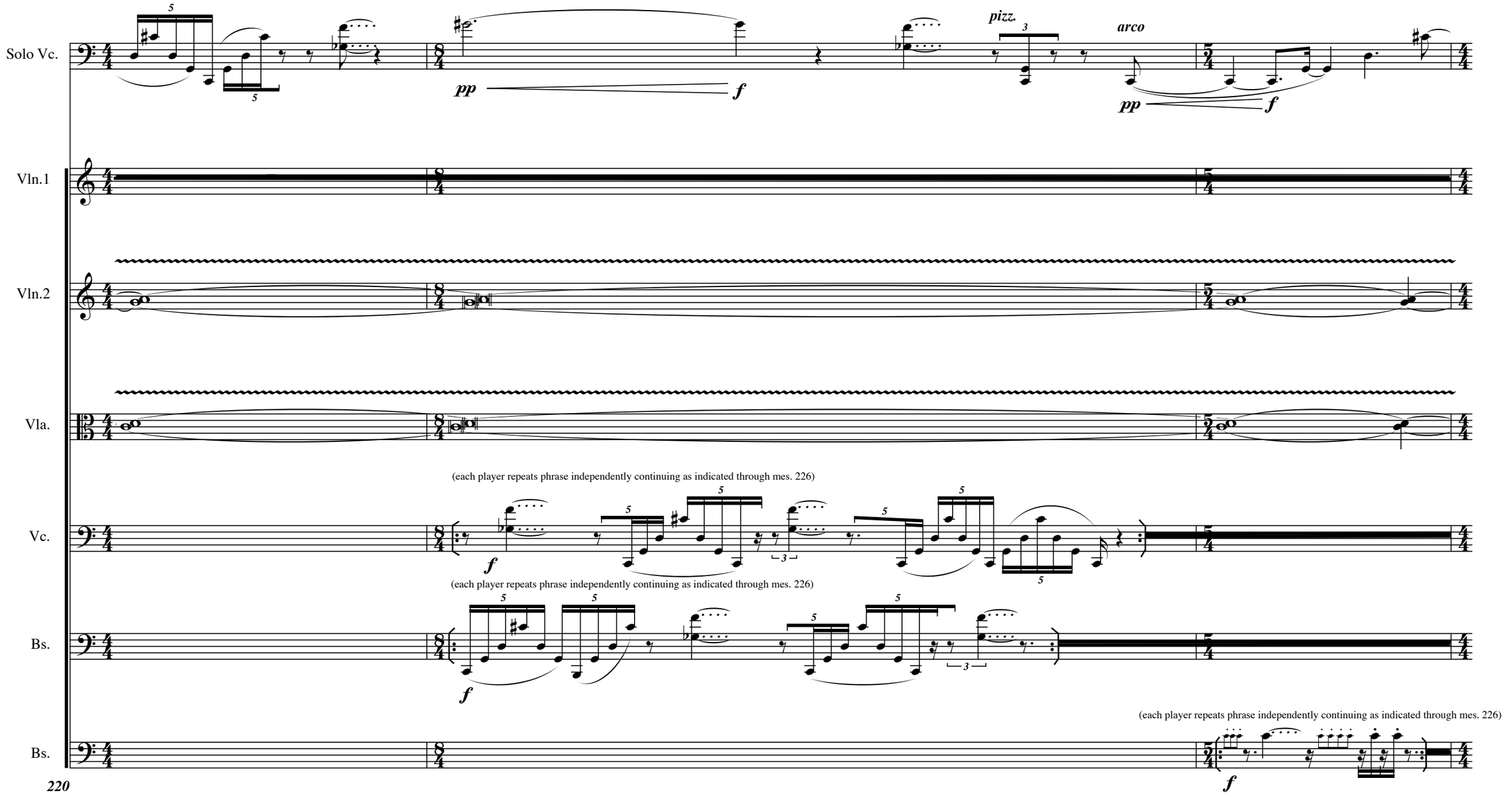

Solo Vc.
Vln.1
Vln.1b
Vln.2
Vln.2b
Vla.
Vc.
Bs.
167
mf
n
mf
pp
mf

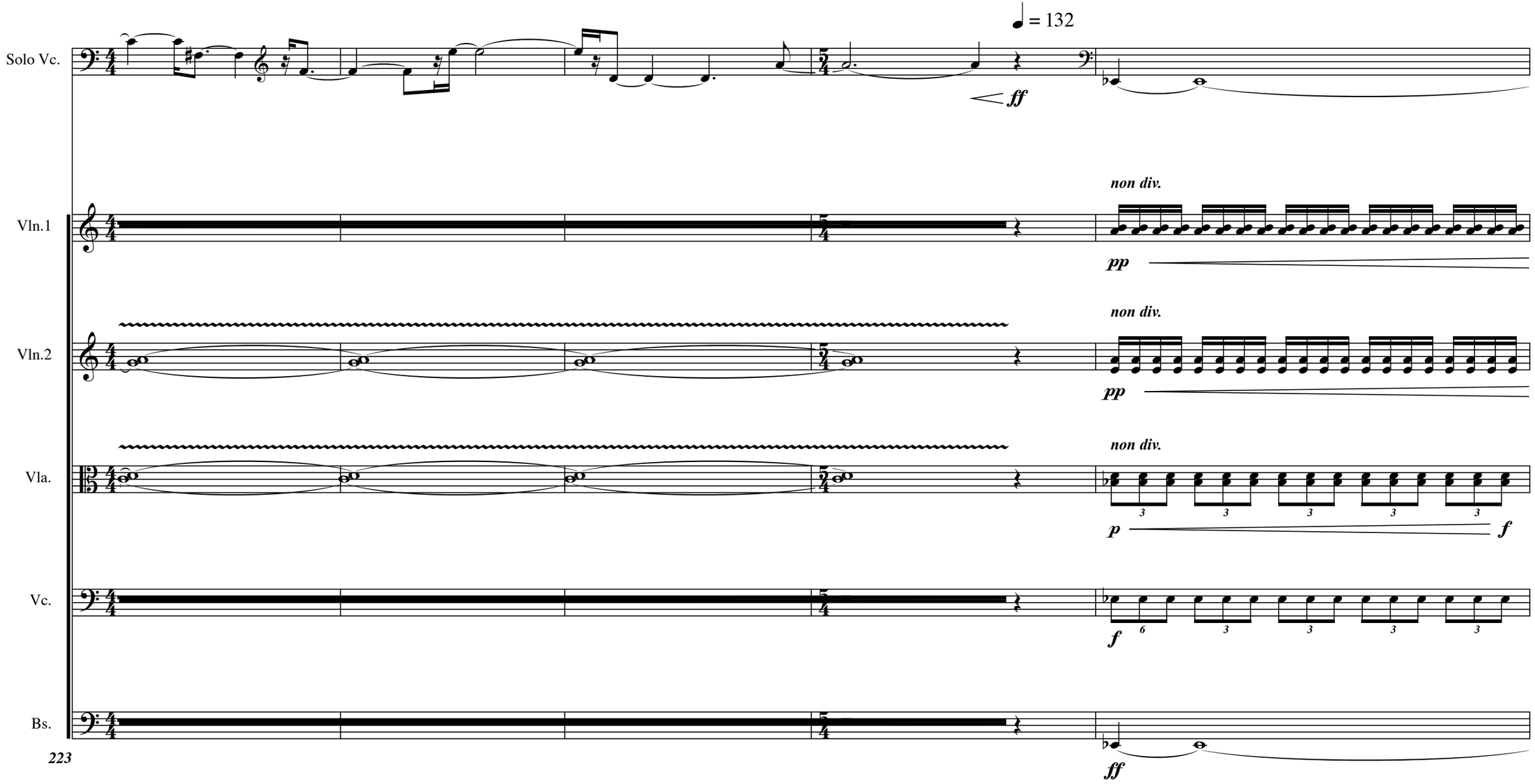

Solo Vc.
Vln.1
Vln.1b
Vln.2
Vln.2b
Vla.
Vc.
Bs.

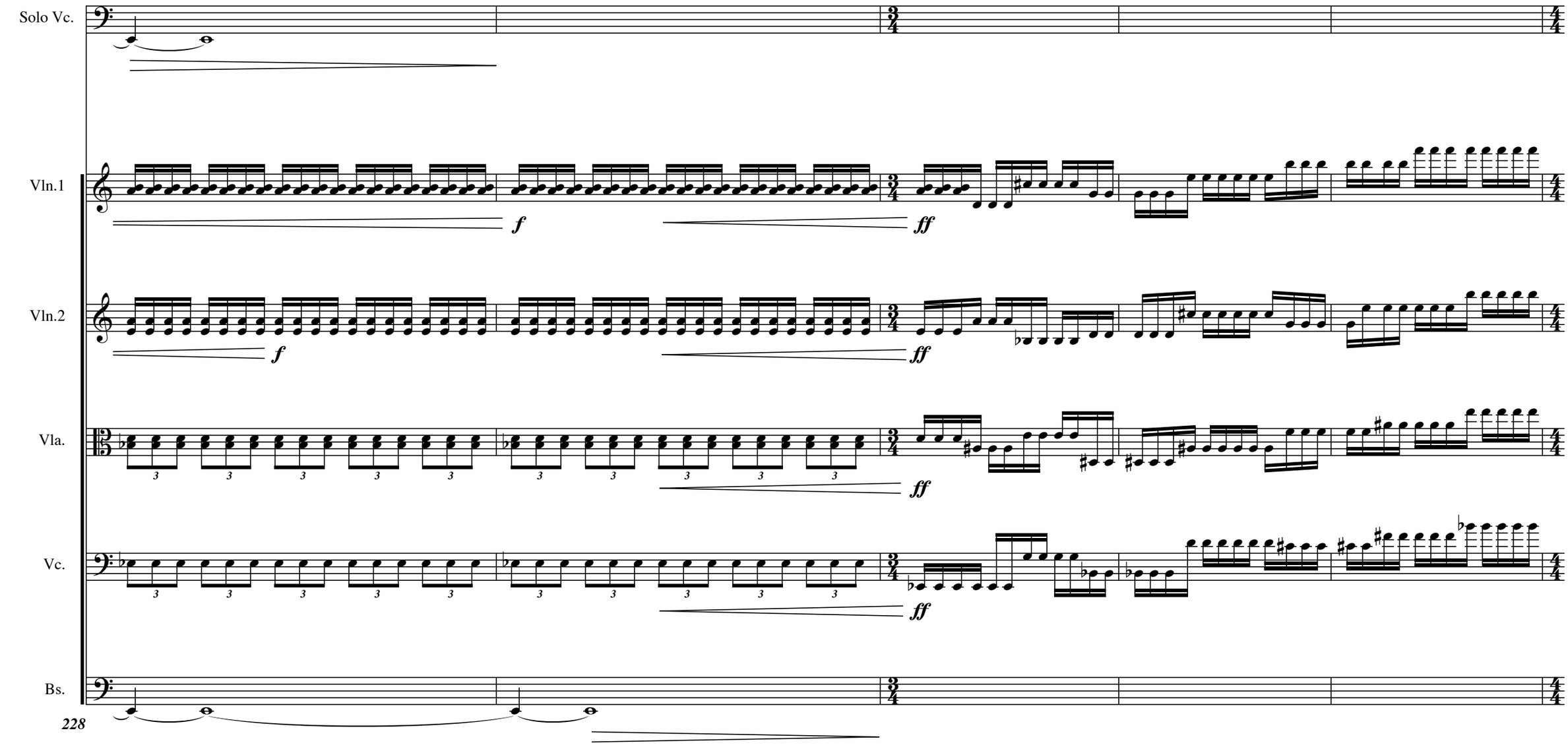

cello cadenza
Solo Vc.
mf
rit. . . . . ♩ = 60
♪ = ♩ = 120
rit. . . . . ♩ = 60
Vln.1
(unis.)
Vln.2
(unis.)
Vla.
Vc.
Bs.
178

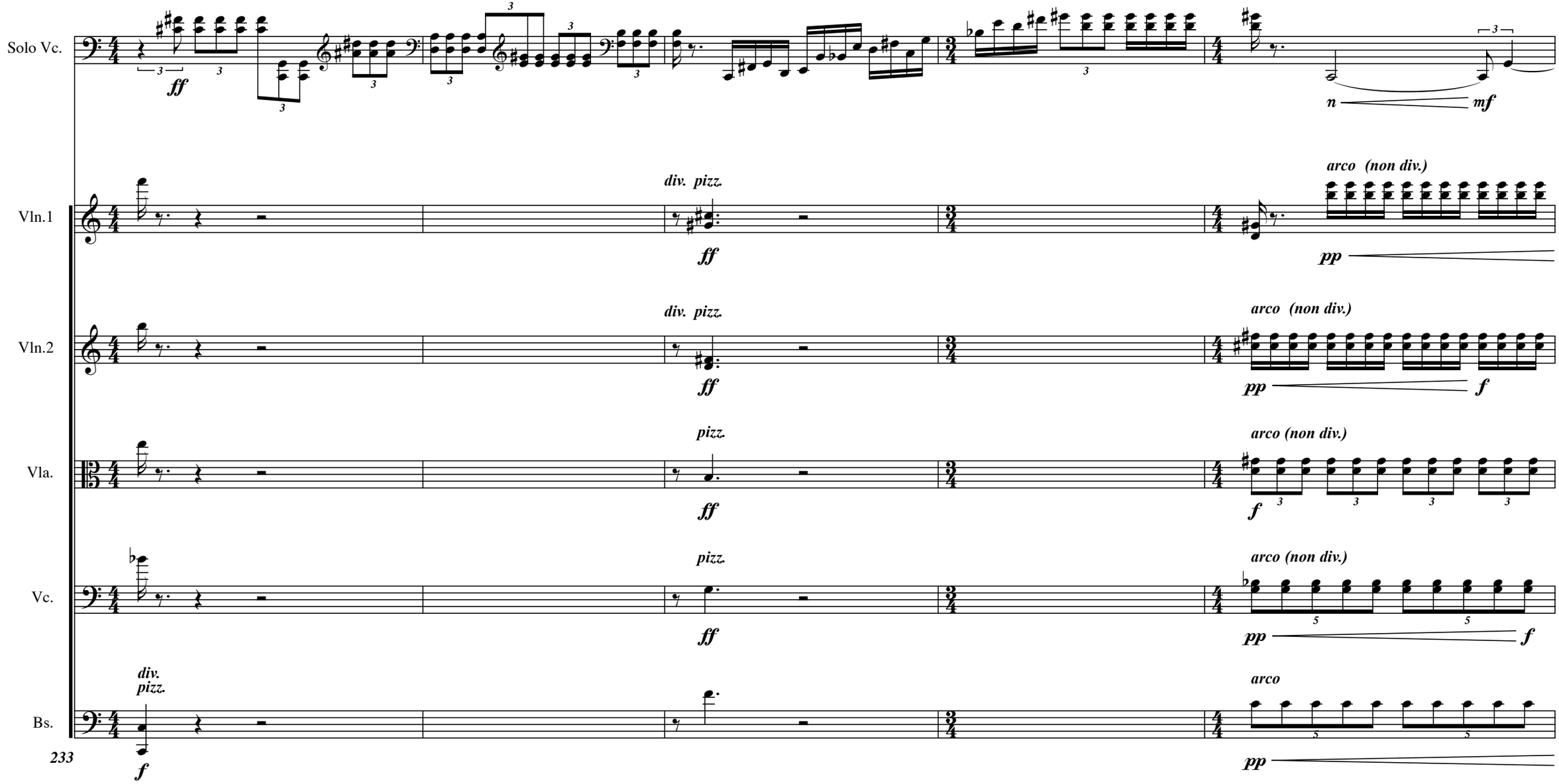

rit. ♩ = 52
esp.
Solo Vc.
182
accel. ♩ = 120
Solo Vc.
187
pp mf
pp f
pp f
pp f
pp f
pp f
pp f
pp f
pp f
♪=♩(=60) accel. ♩ = 120
♪=♩(=60) accel. ♩ = 120
♪=♩(=60) accel.
Solo Vc.
194
(accel.) ♩ = 132
rit.
Solo Vc.
199
(rit.) ♩ = 30
♩=♪(=60)
Solo Vc.
204
fp f
pp f
pp f
pp f
pp f

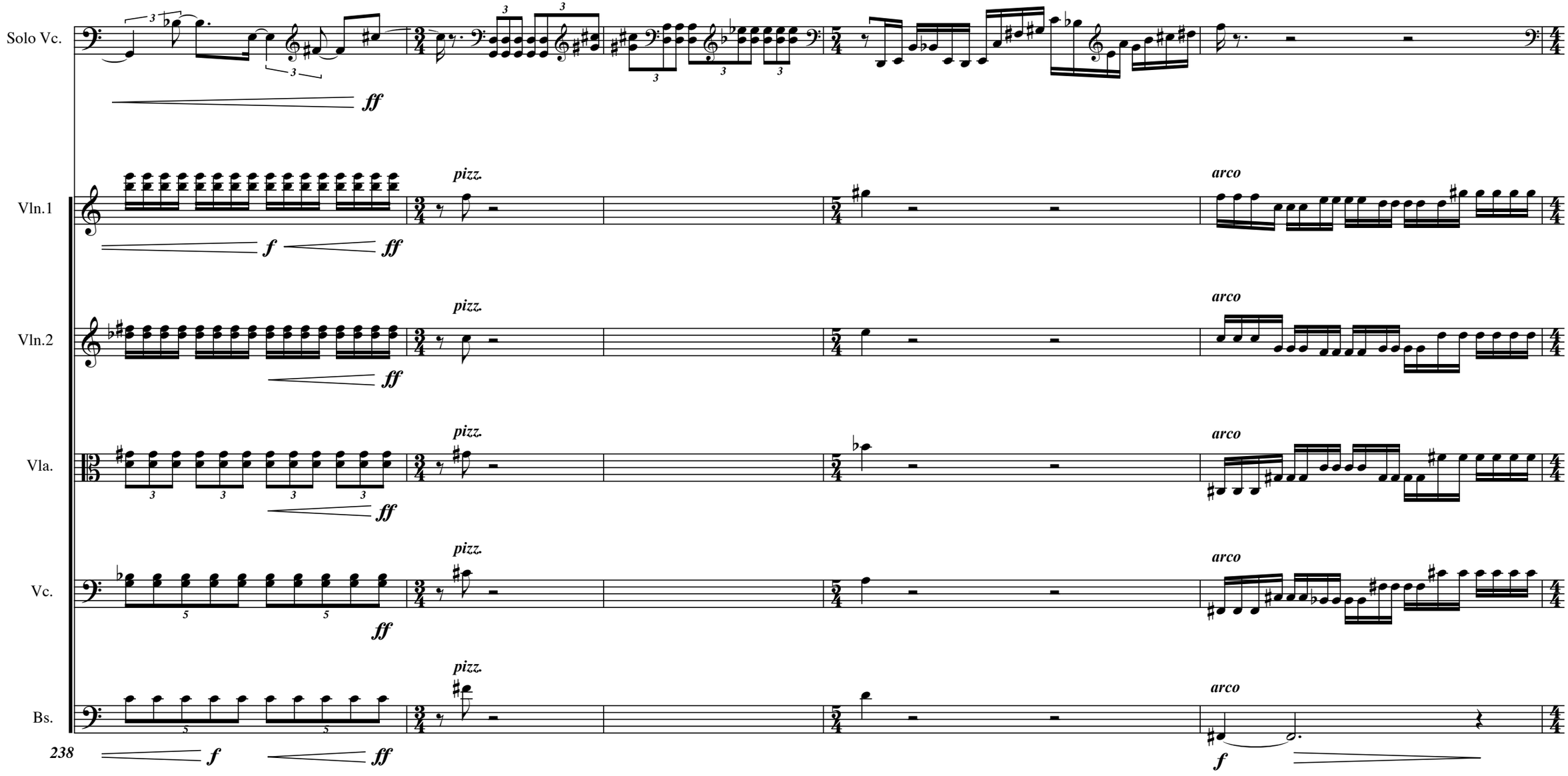

♩ = 112
Solo Vc.
Vln.2
209
pizz.
arco
f
mf
p
(trill from G# to Bb on III while sustaining open A)
pp
Solo Vc.
Vln.1
Vln.1b
Vln.2
Vla.
215
(each player repeats phrase independently continuing as indicated through mes. 226)
(trill from C# to D# on III while sustaining open D)

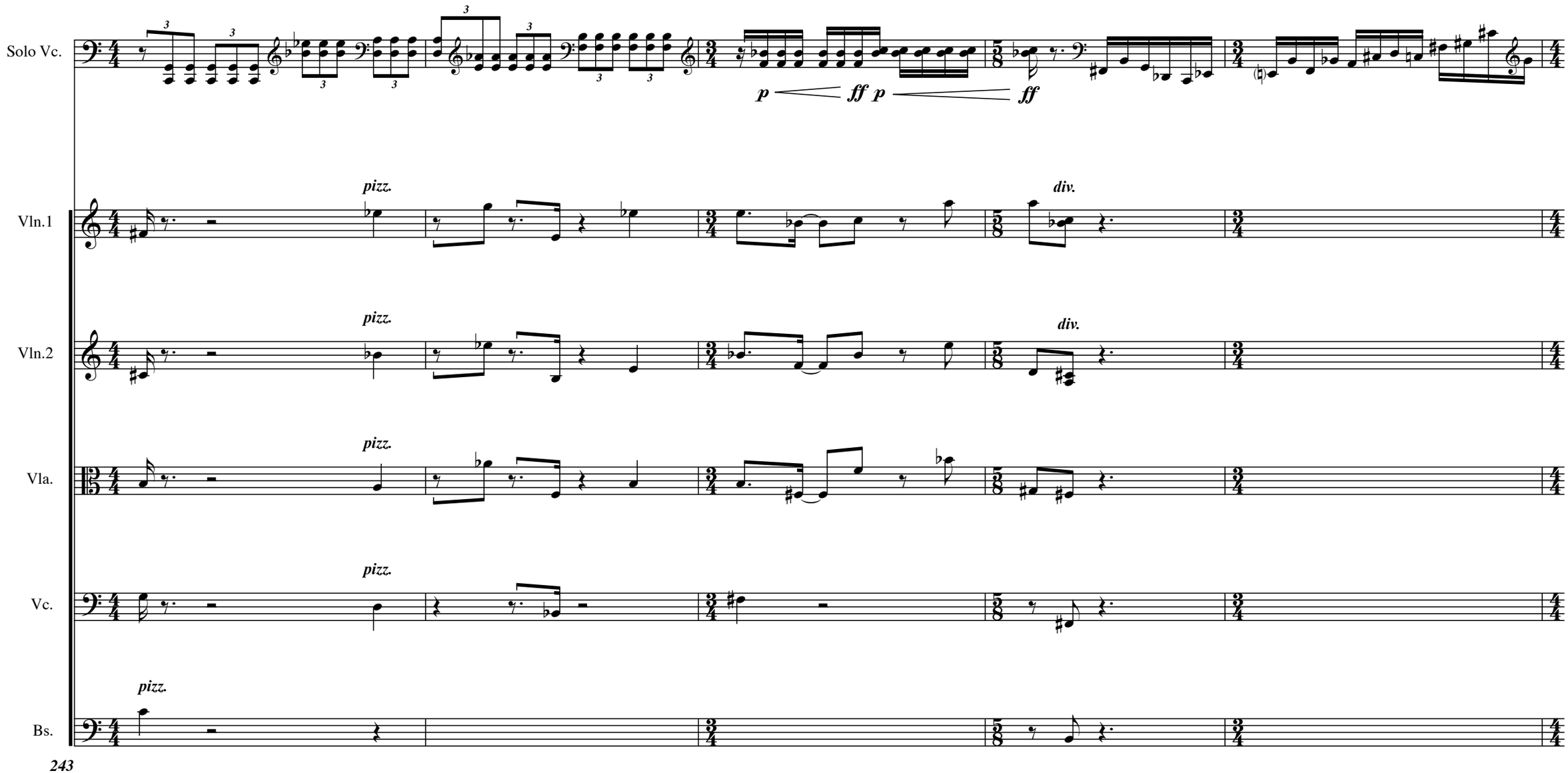

Solo Vc.
pp
f
pizz.
arco
pp
f
Vln.1
Vln.2
Vla.
(each player repeats phrase independently continuing as indicated through mes. 226)
Vc.
f
(each player repeats phrase independently continuing as indicated through mes. 226)
Bs.
f
(each player repeats phrase independently continuing as indicated through mes. 226)
Bs.
f

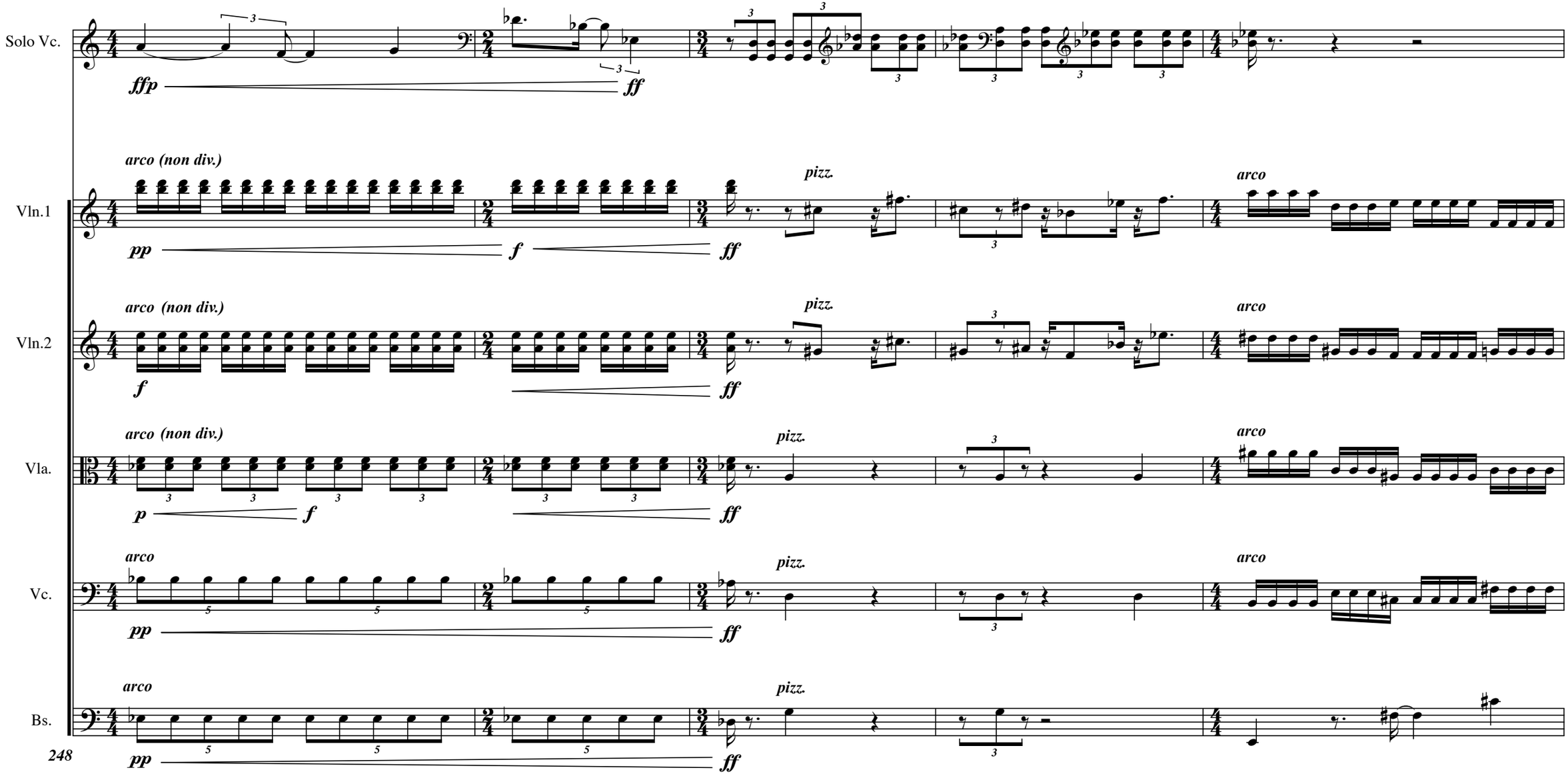

♩ = 132
Solo Vc.
ff
Vln.1
non div.
pp
Vln.2
non div.
pp
Vla.
non div.
p
f
Vc.
f
Bs.
ff
223

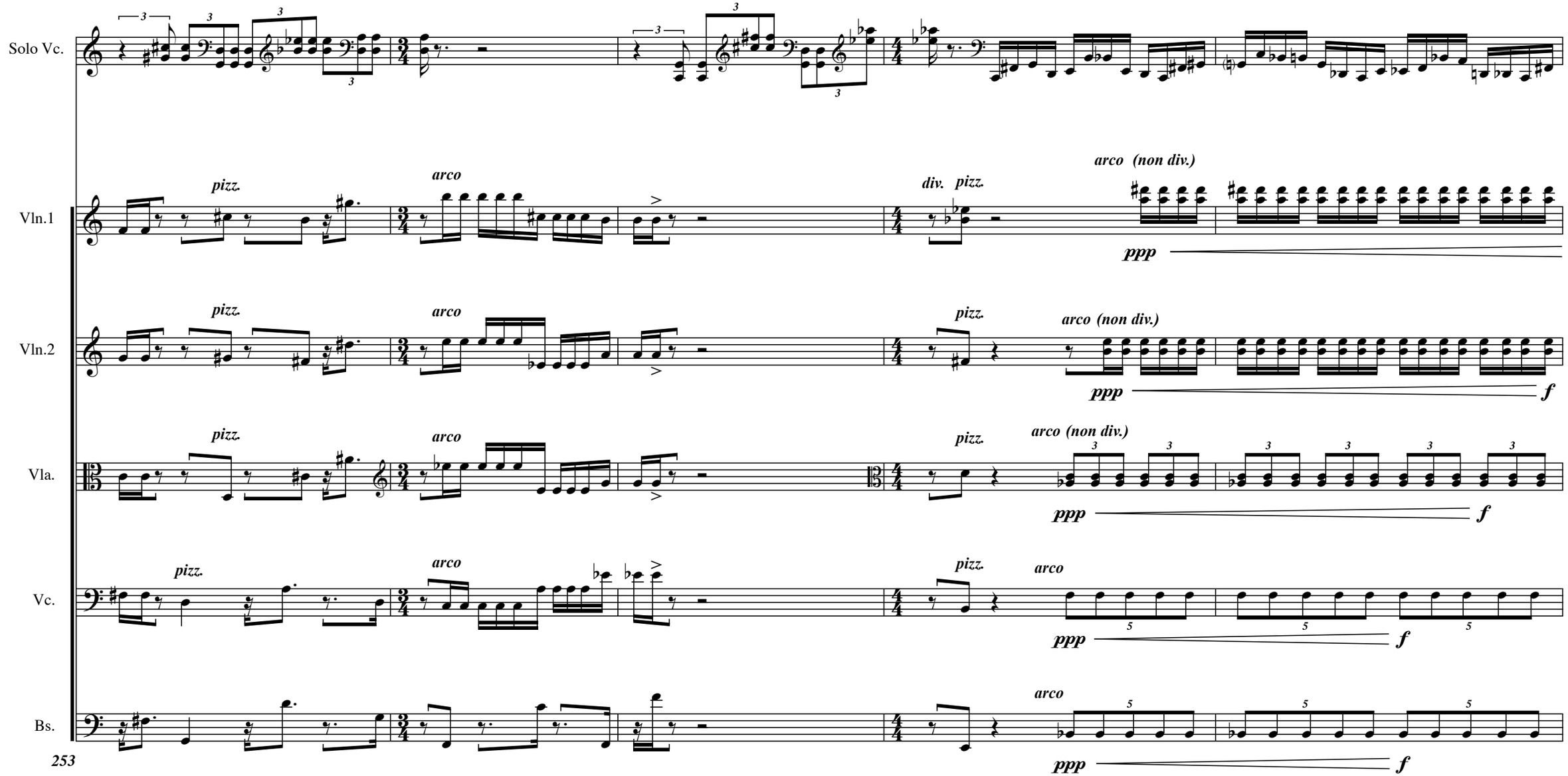

Solo Vc.
Vln.1
Vln.2
Vla.
Vc.
Bs.
f
ff
228

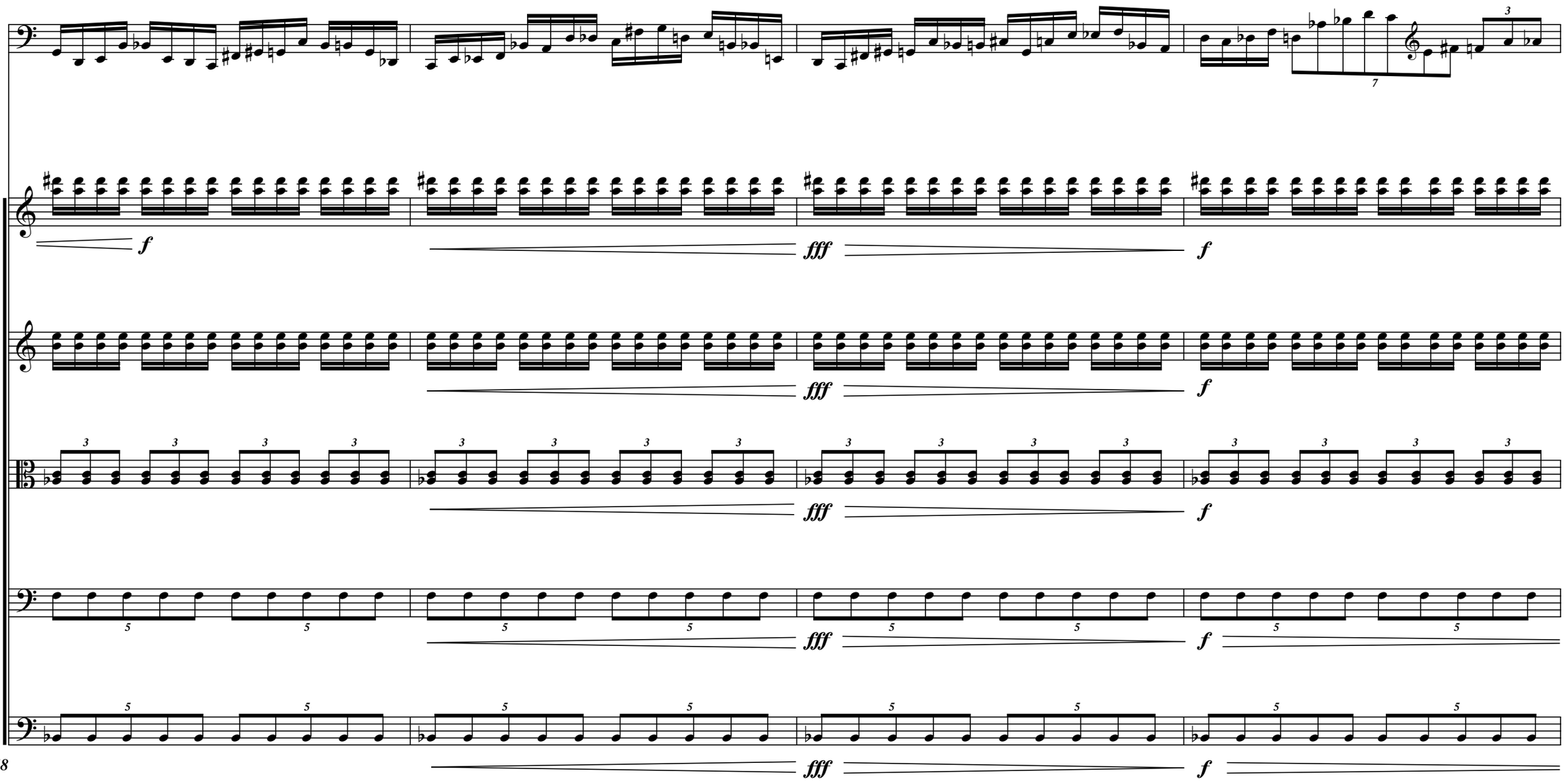

Solo Vc.
ff
n
mf
Vln.1
div. pizz.
ff
arco (non div.)
pp
Vln.2
div. pizz.
ff
arco (non div.)
pp
f
Vla.
pizz.
ff
arco (non div.)
f
Vc.
pizz.
ff
arco (non div.)
pp
f
Bs.
div.
pizz.
f
arco
pp
233

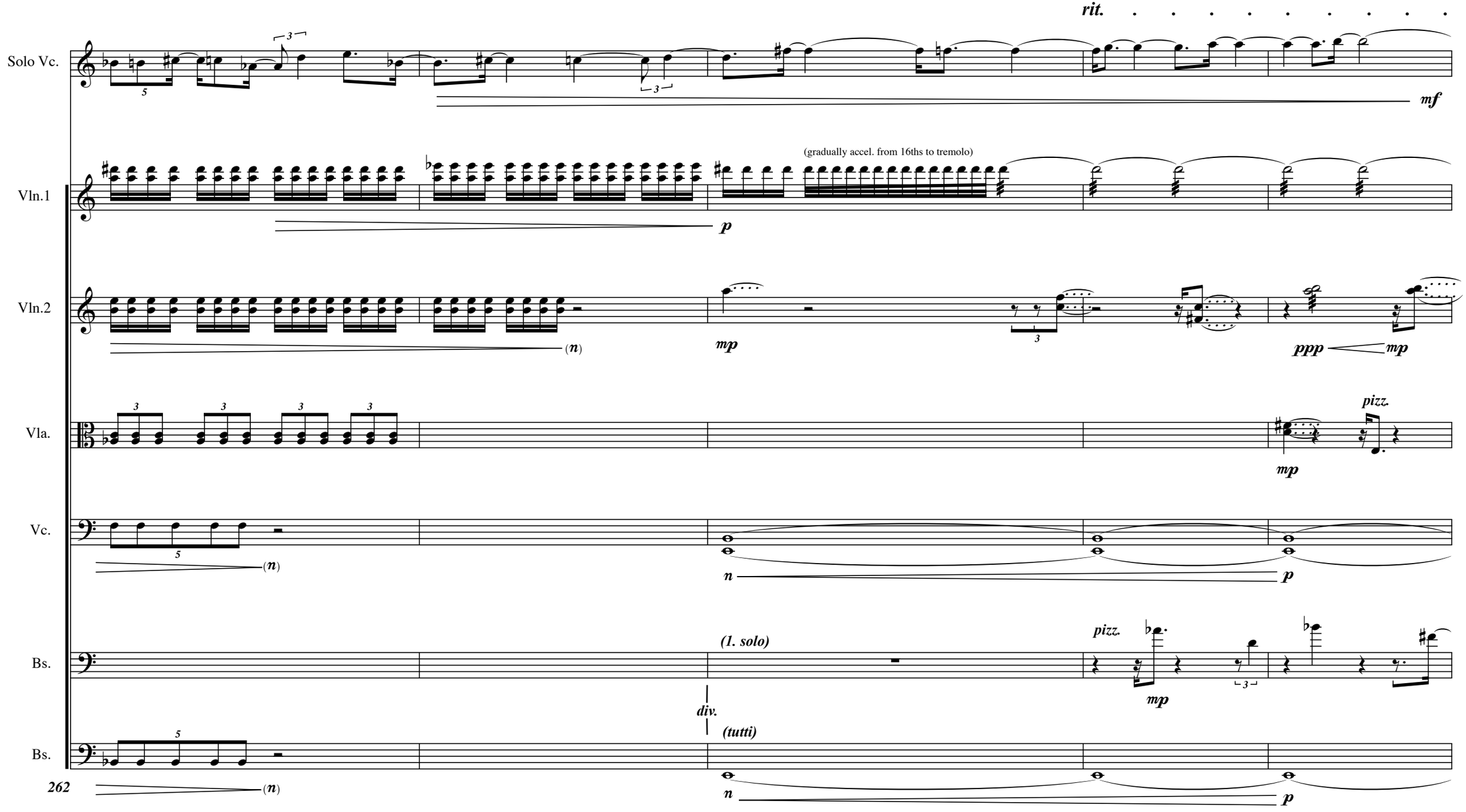

Solo Vc.
Vln.1
Vln.2
Vla.
Vc.
Bs.
ff
f
pizz.
arco
238

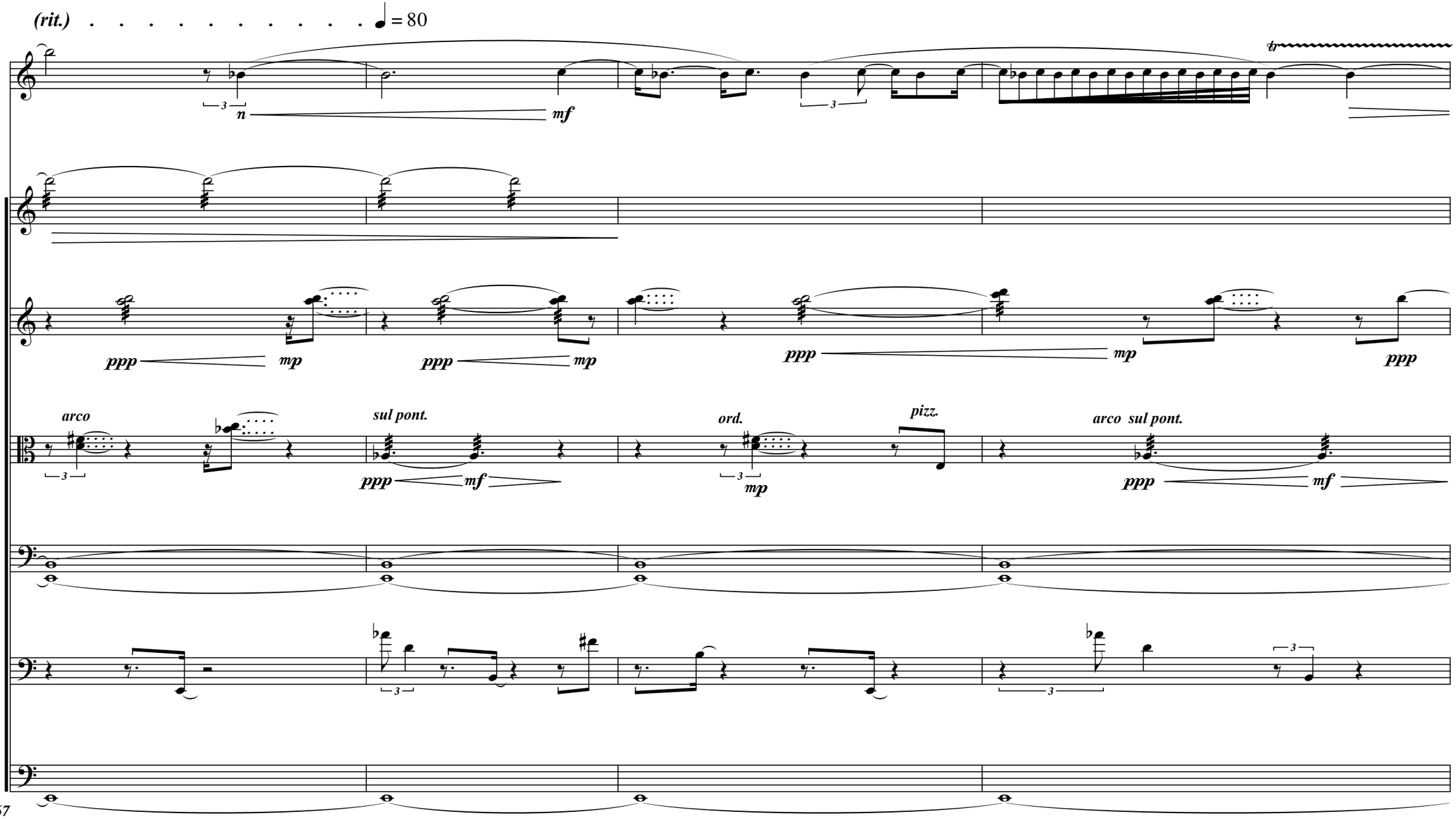

Solo Vc.
Vln.1
Vln.2
Vla.
Vc.
Bs.
p
ff p
ff
pizz.
div.
243

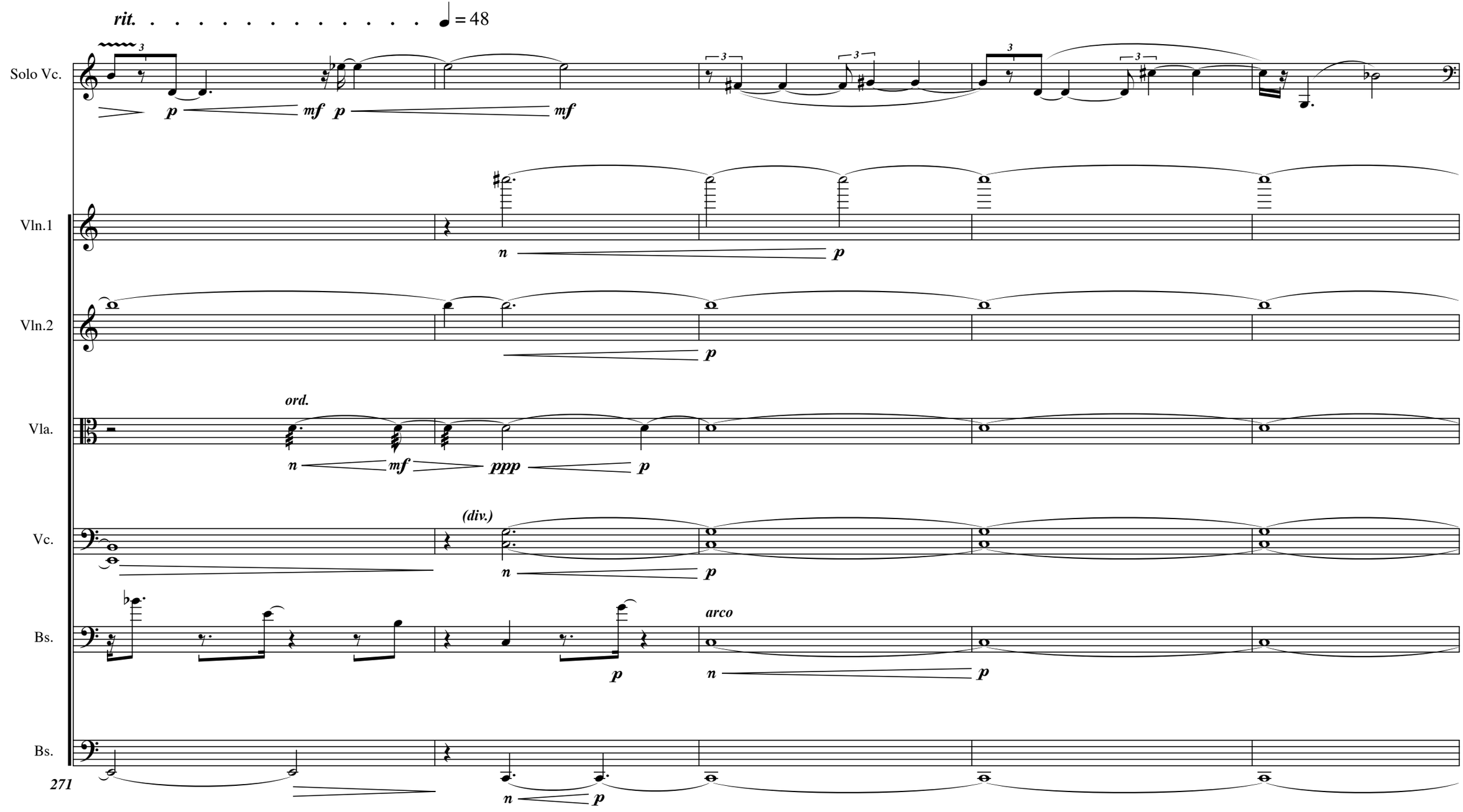

Solo Vc.
ffp
ff
Vln.1
arco (non div.)
pp
f
ff
pizz.
arco
Vln.2
arco (non div.)
f
ff
pizz.
arco
Vla.
arco (non div.)
p
f
ff
pizz.
arco
Vc.
arco
pp
ff
pizz.
arco
Bs.
arco
pp
ff
pizz.
248

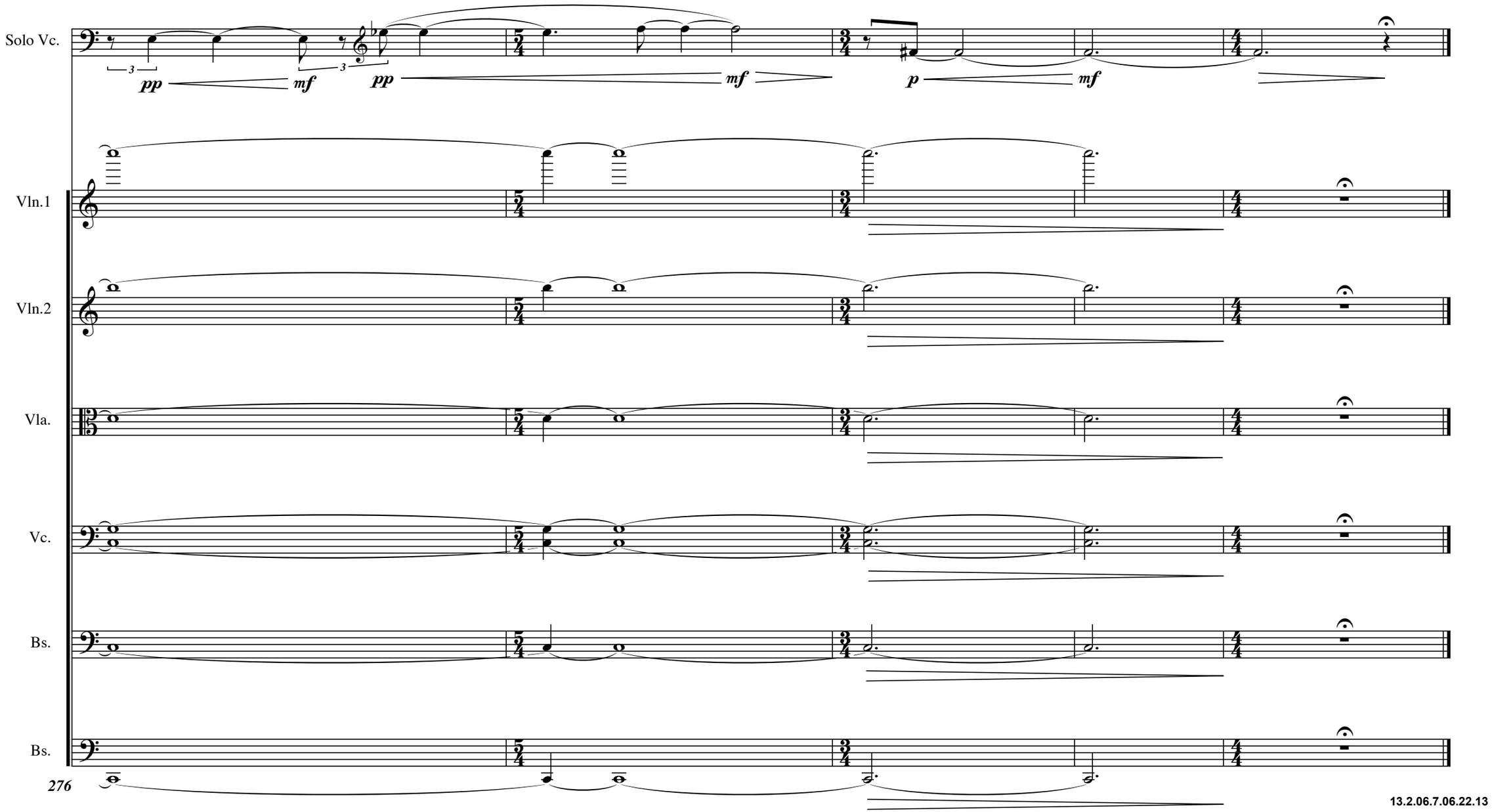

Solo Vc.
Vln.1
Vln.2
Vla.
Vc.
Bs.
pizz.
arco
div. pizz.
arco (non div.)
ppp
f
253


olo Vc.
Vln.1
Vln.2
Vla.
Vc.
Bs.
f
fff
f
258


rit.
Solo Vc.
mf
(gradually accel. from 16ths to tremolo)
Vln.1
p
Vln.2
(n)
mp
ppp
mp
Vla.
pizz.
mp
Vc.
(n)
n
p
(1. solo)
pizz.
mp
Bs.
div.
(tutti)
Bs.
262
(n)
n
p


(rit.)
♩ = 80
Solo Vc.
Vln.1
Vln.2
Vla.
Vc.
Bs.
Bs.
n
mf
tr
ppp
mp
arco
sul pont.
ord.
pizz.
arco sul pont.


rit.
♩ = 48
Solo Vc.
Vln.1
Vln.2
Vla.
Vc.
Bs.
Bs.
ord.
(div.)
arco
271


Solo Vc.
Vln.1
Vln.2
Vla.
Vc.
Bs.
Bs.
pp
mf
pp
mf
p
mf
276