

FUTILITY ROW

FOR THREE RETUNED, COMPUTER-DRIVEN PIANOS

BY KYLE GANN
2015

Technical Specifications

The 33-pitch tuning of the three pianos (the same in every octave) is as follows, given first in the number of cents above E-flat, and then as ratios to the nearest E-flat 1/1 below:

Piano	1		2		3	
D	1088	15/8	977	225/128	1044	117/64
Db	969	7/4	938	55/32	906	27/16
C	857	105/64	773	25/16	840	13/8
B	738	49/32	755	99/64	729	195/128
Bb	702	3/2	590	45/32	609	91/64
A	551	11/8	551	11/8	481	169/128
Ab	471	21/16	440	165/128	408	81/64
G	386	5/4	320	77/64	342	39/32
Gb	204	9/8	275	75/64	275	75/64
F	155	35/32	192	143/128	192	143/128
E	92	135/128	53	33/32	27	65/64
Eb	0	1/1	1103	121/64	1173	63/32

Note that no string needs to be raised higher than its natural tuning except for the B-flat on piano 1, which is 2¢ sharp (or if one prefers, 2¢ could be subtracted from all quantities).

For electronic realization of the piece, it can prove helpful to reconfigure the tuning as a reference pitch in cycles per second for each piano, and ratios derived from that standard:

Tuning pitch:	38.891 cps	36.7641 cps	38.2833 cps
D	15/8	225/121	13/7
Db	7/4	20/11	12/7
C	105/64	200/121	104/63
B	49/32	18/11	65/42
Bb	3/2	180/121	13/9
A	11/8	16/11	169/126
Ab	21/16	15/11	9/7
G	5/4	14/11	26/21
F#	9/8	150/121	25/21
F	35/32	13/11	143/126
E	135/128	12/11	65/63
Eb	1/1	1/1	1/1

In the configuration of certain tuning softwares, the following sequences might facilitate getting the required tuning:

Piano 1:

38.891 = Eb0

1/1, 135/128, 35/32, 9/8, 5/4, 21/16, 11/8, 3/2, 49/32, 105/64, 7/4, 15/8

Piano 2:

36.7641485 = Eb0

1/1, 12/11, 13/11, 150/121, 14/11, 15/11, 16/11, 180/121, 18/11, 200/121, 20/11, 225/121

Piano 3:

38.283333 = Eb0

1/1, 65/63, 143/126, 25/21, 26/21, 9/7, 169/126, 13/9, 65/42, 104/63, 12/7, 13/7

For purposes of analysis, the entire scale (which I refer to as my 8x8 scale) is given below, grouping its pitches into eight harmonic series' on the 1st, 3rd, 5th, 7th, 9th, 11th, 13th, and 15th harmonics of E-flat, and naming each pitch in a typographical equivalent of Ben Johnston's just-intonation notation:

Pitch name	Ratio	Cents	1/1	3/2	5/4	7/4	9/8	11/8	13/8	15/8
Db^^-	121/64	1103						11		
D	15/8	1088	15	5	3					1
Db13	117/64	1044					13		9	
C#+	225/128	977								15
Db7	7/4	969	7			1				
C^	55/32	938			11			5		
C+	27/16	906		9			3			
C7+	105/64	857				15				7
Cb13	13/8	840	13						1	
B	25/16	773			5					
Bb^	99/64	755					11	9		
Cb77+	49/32	738				7				
Bb13	195/128	729							15	13
Bb	3/2	702	3	1						
Bbb713	91/64	609				13			7	
A+	45/32	590		15	9		5			3
Ab^	11/8	551	11					1		
Abb1313	169/128	481							13	
Ab7+	21/16	471		7		3				
G^	165/128	440						15		11
G+	81/64	408					9			
G	5/4	386	5		1					
Gb13	39/32	342		13					3	
Gb7^	77/64	320				11		7		
F#+	75/64	275			15					5
F+	9/8	204	9	3			1			
Fb13^	143/128	192						13	11	
F7+	35/32	155			7	5				
E+	135/128	92					15			9
Eb^	33/32	53		11				3		
Eb13	65/64	27			13				5	
Eb	1/1	0	1							
Eb7+	63/32	1173				9	7			

In Johnston's notation, + raises a pitch by 81/80, # raises it by 25/24, b lowers it by 24/25, 7 lowers it by 35/36, ^ raises it by 33/32, 13 raises it by 65/64, and F-A-C, C-E-G, and G-B-D are all perfectly tuned 4:5:6 major triads.

to Mikel Rouse

Futility Row

Kyle Gann
2015

♩ = 104

Piano 1

Piano 2

Piano 3

f *p*

13 13 5



5

Pno. 1

Pno. 2

Pno. 3

mf *mf* *mp*

5 7

Musical score for Pianos 1, 2, and 3, measures 9-12. Pno.1 and Pno.2 play chords in the right hand and have rests in the left hand. Pno.3 has a rhythmic pattern in the left hand and rests in the right hand. Dynamics include *mp*, *f*, and *mf*. A double bar line is present at the end of measure 12.

Musical score for Pianos 1, 2, and 3, measures 13-16. Pno.1 and Pno.2 play chords in the right hand and have rests in the left hand. Pno.3 has a rhythmic pattern in the left hand and rests in the right hand. Dynamics include *mf* and *f*. Measure numbers 17 and 9 are indicated in the Pno.3 part. A double bar line is present at the end of measure 16.

17

Piano score for measures 17-18. Pno. 1 (top) has three staves with triplets of eighth notes. Pno. 2 (middle) has two staves with triplets of eighth notes and a piano (*p*) dynamic marking. Pno. 3 (bottom) has two staves with eighth notes and a piano (*p*) dynamic marking. A double bar line is present after measure 17.



19

Musical score for measures 19-20. Pno. 1 (top) has two staves with a piano (*p*) dynamic marking in measure 19 and a mezzo-piano (*mp*) dynamic marking in measure 20. Pno. 2 (middle) has two staves with a mezzo-piano (*mp*) dynamic marking in measure 20. Pno. 3 (bottom) has two staves with a piano (*p*) dynamic marking in measure 19 and a mezzo-piano (*mp*) dynamic marking in measure 20. A double bar line is present after measure 19.

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21

Musical score for measures 21-22. The score is divided into three parts: Pno.1, Pno.2, and Pno.3. Pno.1 and Pno.2 have treble clefs, while Pno.3 has a bass clef. The music features complex rhythmic patterns with various note values and rests. Dynamic markings include *p* (piano) and *f* (forte). Time signature changes are indicated by brackets labeled 5:4 and 5:3. Pno.2 has a large oval encompassing several notes in the second measure. Pno.3 has a consistent rhythmic pattern of eighth notes with accents.



23

Musical score for measures 23-24. The score is divided into three parts: Pno.1, Pno.2, and Pno.3. Pno.1 and Pno.2 have treble clefs, while Pno.3 has a bass clef. The music features complex rhythmic patterns with various note values and rests. Dynamic markings include *f* (forte). Time signature changes are indicated by brackets labeled 5:4. Pno.1 has a large oval encompassing several notes in the first measure. Pno.2 has a large oval encompassing several notes in the second measure. Pno.3 has a consistent rhythmic pattern of eighth notes with accents.

26

Pno.1

Pno.2

Pno.3

15 3 5 p

15 3 5 p

15 3 p

g

30

Pno.2

Pno.3

ff 17

p 7 11 11 11

p 9 9 9

p 5 5 5

ff 17

Futility Row

33

Pno. 3

11 11 9 9 5 5 17 ff 13 5

36

Pno. 1

Pno. 2

Pno. 3

mf 5 7 5 5 5 7 5 5 7 5 5 7 5

40

Pno. 1

Pno. 2

Pno. 3

mp 5 5 5

43

Pno.1

Pno.2

Pno.3

The musical score consists of three staves. Pno.1 and Pno.2 play melodic lines with trills and grace notes, marked 'p'. Pno.3 has a complex bass line with a 'ff' dynamic and a triplet. The score includes various musical notations such as stems, beams, and dynamic markings.

46

Pno.1

pp

pp

mf

mf

mp

Pno.2

pp

mf

mp

Pno.3

v

50

Pno.1

Pno.2

Pno.3

f

f

f

p

mf

17

mf

9

mf



54

Pno.1

Pno.2

Pno.3

f

mf

f

mf

f

mf

58

Pno.1

Pno.2

Pno.3

3 p 7 5 5

3 p 7 5 5

p 7 5 5



61

Pno.2

Pno.3

mp

ff 17

mp

ff 17

5 5

64

Pno.1

mp

mp

5

Pno.2

mp

f 17

5

Pno.3

p

mp

f 17



68

Pno.1

p

5:3 5 5:3

5

5

Pno.2

p

5:3 5 5:3

5

5

Pno.3

p

5:3 5 5:3

5

Futility Row

71

Pno.3

fff mp

75

Pno.1

p 11:8 9:8 7:4 p

Pno.2

17 ff p 11:8 9:8 7:4 p

Pno.3

17 ff p 7 11:8 9:8 7:4 p 11:8 9:8 7:4 p

78

Pno.2

9

11:8

p

11:8

9:8

p

9:8

7:4

p

7:4

9

ff

13

ff



81

Pno.2

pp

pp

pp

pp

Pno.3

p

Futility Row

85

Piano score for three pianos (Pno.1, Pno.2, Pno.3) starting at measure 85. The score is written in treble and bass clefs. Pno.1 and Pno.2 have melodic lines with dynamics *mp*, *f*, and *pp*. Pno.3 has a rhythmic accompaniment in the first measure.

Pno.1

Measure 85: Treble clef, rests. Bass clef, eighth-note accompaniment. Dynamics: *mp* (first staff), *f* (second staff), *mp* (third staff).

Pno.2

Measure 85: Treble clef, rests. Bass clef, eighth-note accompaniment. Dynamics: *mp* (first staff), *pp* (second staff), *mp* (third staff).

Pno.3

Measure 85: Treble clef, eighth-note accompaniment. Bass clef, eighth-note accompaniment. Dynamics: *pp* (first staff), *pp* (second staff).

89

Pno.1

3:2

Pno.2

3:2

3:2

ff ————— *mp*

Pno.3

p

ff ————— *mp*



93

Pno.3

f

15

ff

Futility Row

96

Pno.1

Pno.2

Pno.3

15:8

5 p

mp 7

5 p

mp 7

3

15

99

Pno.1

Pno.2

Pno.3

f

f

mf

mf

17

9



103

Pno.1

Pno.2

Pno.3

p

p

p

3

3

11

3

11

Futility Row

106

Pno.1

mf *f* *mp*

Pno.2

mf *mp*

Pno.3

mf *mp*



110

Pno.2

ff 17

Pno.3

f *mp* *ff* 17 *mp*

114

Pno.1

Pno.2

Pno.3

Musical score for measures 114-116. Pno.1: Treble clef, notes with dynamics *mf* and *p*. Pno.2: Treble and Bass clefs, notes with dynamics *mf* and *p*, and a *f* dynamic with a 17-measure bracket. Pno.3: Treble and Bass clefs, notes with dynamics *p* and *f*, and a 17-measure bracket. A double bar line is present at the end of measure 116.

117

Pno.1

Pno.2

Pno.3

Musical score for measures 117-120. Pno.1: Treble clef, notes with dynamics *f*, *mf*, and *p*, including triplets and a 5-measure bracket. Pno.2: Treble clef, notes with dynamics *f*, *mf*, and *p*, including triplets and 5-measure brackets. Pno.3: Treble and Bass clefs, notes with dynamics *f* and *p*, including a triplet and a 5-measure bracket.

Futility Row

121

Pno.1

Pno.2

Pno.3

5

5

5



123

Pno.2

Pno.3

ff 17

ff 17



125

Pno.1

Pno.2

Pno.3

p

p

p

f 17

129

Pno.1

Musical score for Piano 1, measures 129-132. The score is written for three staves: Treble, Middle, and Bass. The Treble staff has a melodic line starting in measure 130 with a dynamic of *mf*, featuring a 17-measure slur and a 5-measure slur. The Middle staff has a sustained bass line with a dynamic of *mf*. The Bass staff has a rhythmic accompaniment of eighth notes with a dynamic of *f*.

Pno.2

Musical score for Piano 2, measures 129-132. The score is written for three staves: Treble, Middle, and Bass. The Treble staff has a melodic line starting in measure 130 with a dynamic of *mf*, featuring a 17-measure slur and a 5-measure slur. The Middle staff has a sustained bass line with a dynamic of *f*. The Bass staff has a rhythmic accompaniment of eighth notes with a dynamic of *mp*.

Pno.3

Musical score for Piano 3, measures 129-132. The score is written for three staves: Treble, Middle, and Bass. The Treble staff has a melodic line starting in measure 129 with a dynamic of *mf*, featuring a 17-measure slur and a 5-measure slur. The Middle staff has a sustained bass line with a dynamic of *p*. The Bass staff has a rhythmic accompaniment of eighth notes with a dynamic of *mf*.

Futility Row

133

Pno. 1

Pno. 2

Pno. 3

136

The musical score is divided into three systems, each for a different piano (Pno. 1, Pno. 2, Pno. 3). Each system contains four staves. The time signature is 2/4. The score includes various musical notations such as triplets, 5:3 and 7:4 ratios, and dynamic markings like *mp*. The first system (Pno. 1) features a triplet in the upper staff and a 5:3 ratio in the lower staff. The second system (Pno. 2) features a 5:3 ratio in the lower staff. The third system (Pno. 3) features a 7:4 ratio in the lower staff and a 5:3 ratio in the upper staff.

Futility Row

140

Piano score for measures 140 and 141. The score is divided into three parts: Pno.1, Pno.2, and Pno.3. Pno.1 and Pno.2 have treble clefs, while Pno.3 has a bass clef. The music features complex rhythmic patterns with time signatures of 5:4 and 5:3. Dynamic markings include *p* (piano). Pno.2 has a large oval marking over a sustained chord in measure 141. Pno.3 has a consistent eighth-note pattern in the bass line.

Musical score for measures 142, 143, and 144. Pno.1 and Pno.2 have treble clefs, and Pno.3 has a bass clef. Measure 142 shows sustained chords in Pno.1 and Pno.2. Measure 143 features a melodic line in Pno.3 with a dynamic marking of *mf* and a fingering of 17. Measure 144 continues the Pno.3 line with a dynamic marking of *mf* and a fingering of 9. Pno.1 and Pno.2 have a final chord in measure 144 with a dynamic marking of *f*.

145 25

Pno.1

Pno.2

Pno.3

p 25 *p* *f* *mf* 3 3 3
p 25 *p* *f* *mf* 3 3 3
p 25 *p* *f* 3

148

Pno.1

Pno.2

Pno.3

f 5 *ff* 17
f 5 *mp* 7 *ff* 17

Futility Row

152

Pno.3

mp

pp 5



155

Pno.1

mp 3:2

Pno.2

f 17

ff

mp 3

Pno.3

f 17

mp 3

159

Pno.1

mp 5

Pno.2

ff 3

ff 9

Pno.3

mp 5



162

Pno.1

mp 5:4

p 7:4

Pno.2

ff 7

p

ff 17

Pno.3

mp 5

p 7

ff 17

Futility Row

165

Pno.2

Pno.3

The musical score for Pno.2 and Pno.3 spans measures 165 to 168. Pno.2 consists of three staves. In measure 165, all three staves have whole rests. In measure 166, the top staff has a quarter rest, the middle staff has a quarter rest, and the bottom staff has a quarter note G4. In measure 167, the top staff has a quarter rest, the middle staff has a quarter note G4, and the bottom staff has a quarter note G4. In measure 168, the top staff has a quarter note G4, the middle staff has a quarter note G4, and the bottom staff has a quarter note G4. Pno.3 consists of four staves. In measure 165, the top staff has a quarter note G4, the second staff has a quarter rest, the third staff has a quarter rest, and the bottom staff has a quarter note G4. In measure 166, the top staff has a quarter note G4, the second staff has a quarter note G4, the third staff has a quarter note G4, and the bottom staff has a quarter note G4. In measure 167, the top staff has a quarter note G4, the second staff has a quarter note G4, the third staff has a quarter note G4, and the bottom staff has a quarter note G4. In measure 168, the top staff has a quarter note G4, the second staff has a quarter note G4, the third staff has a quarter note G4, and the bottom staff has a quarter note G4. The score includes various musical notations such as rests, notes, slurs, and dynamic markings like 'p' and 'ff'.

167

Pno. 1

Pno. 2

Pno. 3

ff

ff

7, 9, 11, 17

Futility Row

169

Pno.3

11 *mf* 11 11 *p* 11 11

9 *mf* 11 11 *p* 11 11

7 *mf* 11 11 *p* 11 11

13 *ff*

172

Pno.1

Pno.2

Pno.3

ff

5

ff

ff

ff

pp

pp

pp

ff

5

ff

ff

3

ff

Futility Row

176

Pno.1

Musical score for Piano 1, measures 176-179. The score is written for three staves: Treble, Bass, and a lower Bass staff. Measure 176 features a fermata over a half note in the Treble staff. Measure 177 is mostly rests. Measure 178 begins with a melodic line in the Bass staff marked *mp* and a rhythmic accompaniment in the lower Bass staff. Measure 179 continues the melodic line in the Bass staff.

Pno.2

Musical score for Piano 2, measures 176-179. The score is written for three staves: Treble, Middle, and Bass. Measure 176 features a fermata over a half note in the Treble staff. Measure 177 is mostly rests. Measure 178 begins with a melodic line in the Treble staff marked *f* and a rhythmic accompaniment in the Bass staff marked *mp*. Measure 179 continues the melodic line in the Treble staff and the rhythmic accompaniment in the Bass staff marked *mp*.

Pno.3

Musical score for Piano 3, measures 176-179. The score is written for three staves: Treble, Middle, and Bass. Measure 176 features a fermata over a half note in the Treble staff. Measure 177 continues the fermata in the Treble staff. Measure 178 begins with a melodic line in the Middle staff marked *f* and a rhythmic accompaniment in the Bass staff marked *mf*. Measure 179 continues the melodic line in the Middle staff and the rhythmic accompaniment in the Bass staff.

Futility Row

180

The musical score is divided into three parts: Pno. 1, Pno. 2, and Pno. 3. Pno. 1 consists of three staves (treble, middle, and bass clefs) with a 2/4 time signature. Pno. 2 is a single bass clef staff. Pno. 3 consists of seven staves (three treble clefs and four bass clefs) with a 2/4 time signature. The score includes various musical notations such as dynamics (p, mf, f), fingering (5, 9, 7, 13), and articulation (accents, slurs). The piece is titled 'Futility Row'.

Futility Row

184

The image displays a musical score for three pianos, labeled Pno. 1, Pno. 2, and Pno. 3. The score is written in 4/4 time and consists of three systems of staves. Pno. 1 is the top system, Pno. 2 is the middle system, and Pno. 3 is the bottom system. Each piano part has two staves (treble and bass clef). The notation includes various musical symbols such as notes, rests, beams, and dynamic markings. Pno. 1 features a melodic line in the right hand and a bass line in the left hand. Pno. 2 has a similar structure but includes a key signature change to one sharp (F#) in the second measure. Pno. 3 has a more complex texture, with a right hand part featuring chords and a left hand part with a rhythmic pattern of eighth notes. The score is presented in a clean, black-and-white format.

188

Pno.1

Pno.2

Pno.3

The musical score is divided into three systems, each for a piano (Pno.1, Pno.2, Pno.3). Each system contains two staves (treble and bass clef). Measure 188 is marked with a forte (*f*) dynamic. Pno.1 features a complex rhythmic pattern with triplets and septuplets in the right hand and a steady eighth-note accompaniment in the left hand. Pno.2 and Pno.3 have similar rhythmic structures but with different melodic lines. Pno.2 includes a mezzo-forte (*mf*) dynamic marking. Pno.3 includes a mezzo-piano (*mp*) dynamic marking. The score concludes with a 13-measure rest in the right hand of Pno.3, marked with a forte (*f*) dynamic.

Futility Row

192

Piano score for measures 192-195. The score is divided into Pno.2 and Pno.3. Pno.2 has a single bass line. Pno.3 consists of four staves: two treble clefs and two bass clefs. The music features complex textures with triplets, sixteenth-note patterns, and dynamic markings such as *pp* and *ppp*. A fermata is present over a note in the lower bass staff of Pno.3 at measure 195.



Piano score for measures 196-200. The score is divided into Pno.1, Pno.2, and Pno.3. Pno.1 has two staves (treble and bass). Pno.2 has one treble staff. Pno.3 has two staves (treble and bass). The music features complex textures with triplets, sixteenth-note patterns, and dynamic markings such as *p* and *f*. A fermata is present over a note in the upper treble staff of Pno.1 at measure 196.

Futility Row

199

Pno.1

Pno.2

Pno.3

f 17

f 17



203

Pno.1

Pno.3

mp

mp

ff 17

207

Pno.1

Musical score for Piano 1, measures 207-210. The score is in 4/4 time and features four staves. The first staff is a grand staff (treble and bass clefs). The second and third staves are treble clefs. The fourth staff is a bass clef. The piece is marked with a piano (*p*) dynamic. Fingerings are indicated with numbers 5, 11, 15, and 17. Slurs connect notes across measures. A Pedal (Ped.) marking is present at the beginning of the first staff.

Pno.2

Musical score for Piano 2, measures 207-210. The score is in 4/4 time and features four staves. The first staff is a grand staff. The second and third staves are treble clefs. The fourth staff is a bass clef. The piece is marked with a piano (*p*) dynamic. Fingerings are indicated with numbers 5, 7, 11, 13, and 15. Slurs connect notes across measures. A fortissimo (*ff*) dynamic marking is present at the beginning of the first staff.

Pno.3

Musical score for Piano 3, measures 207-210. The score is in 4/4 time and features four staves. The first staff is a grand staff. The second and third staves are treble clefs. The fourth staff is a bass clef. The piece is marked with a piano (*p*) dynamic. Fingerings are indicated with numbers 5, 9, and 13. Slurs connect notes across measures. A fortissimo (*ff*) dynamic marking is present at the beginning of the first staff.

211

Pno.1

Pno.2

Pno.3

Futility Row

214

Piano score for measures 214-217. The score is divided into three parts: Pno.1, Pno.2, and Pno.3. Pno.1 is in the bass clef and has a *mf* dynamic. Pno.2 is in the bass clef and features a triplet of eighth notes with a *f* dynamic. Pno.3 is in the bass clef and features a triplet of eighth notes with a *mp* dynamic. The music includes various rests and melodic lines.



218

Piano score for measures 218-221. The score is divided into three parts: Pno.1, Pno.2, and Pno.3. Pno.1 is in the treble clef and has a *p* dynamic. Pno.2 is in the treble clef and has a *p* dynamic. Pno.3 is in the bass clef and has a *f* dynamic. The music includes various rests and melodic lines, with a triplet of eighth notes in Pno.3.

Futility Row

221

The score is divided into three systems, each for a piano (Pno. 1, Pno. 2, Pno. 3). Pno. 1 and Pno. 2 each have a treble and bass staff. Pno. 3 has three staves: a grand staff (treble and bass) and a separate bass staff. Dynamics include *mp* (mezzo-piano), *p* (piano), and *ff* (fortissimo). Articulations include accents (>) and slurs. A large brace at the bottom spans the first and second measures of the Pno. 3 grand staff, with a *ff* dynamic marking at the beginning and a *p* marking at the end. Rehearsal marks '13' are present above the Pno. 1 and Pno. 2 staves.

Futility Row

223

Pno.1

Pno.2

Pno.3

The image shows a musical score for three pianos, labeled Pno.1, Pno.2, and Pno.3. The score is written on a grand staff for each piano, with a treble and bass clef. Measure 223 is indicated at the beginning of the first system. Measure 13 is marked with a bracket and the number '13' in three different locations: above the first piano's treble staff, below the second piano's bass staff, and below the third piano's bass staff. The notation includes various rhythmic values, accidentals, and articulation marks such as accents and slurs. The overall layout is clean and professional, typical of a printed musical score.

224

Pno.1

Musical score for Pno.1, measures 224-225. The score consists of six staves. The top four staves are treble clef, and the bottom two are bass clef. The music features complex rhythmic patterns with triplets and quintuplets. Dynamics include *p*, *mf*, and *f*. A key signature change to B-flat major is indicated by a 'b' symbol above the first staff in measure 224.

Pno.3

Musical score for Pno.3, measures 224-225. The score consists of six staves. The top four staves are treble clef, and the bottom two are bass clef. The music features complex rhythmic patterns with triplets and quintuplets. Dynamics include *mf* and *mp*. A key signature change to B-flat major is indicated by a 'b' symbol above the first staff in measure 224.

Futility Row

226

The musical score is divided into three systems, each for a different piano (Pno.1, Pno.2, Pno.3).
- **Pno.1:** Features six staves. The top two staves (treble clef) play a rapid sixteenth-note scale starting on a flat, with dynamics *p* and *mf*. The bottom two staves (bass clef) play a slower melodic line with dynamics *p* and *mf*.
- **Pno.2:** Features two staves. The top staff (treble clef) plays a melodic line with dynamics *p* and *mf*. The bottom staff (bass clef) is mostly silent.
- **Pno.3:** Features four staves. The top two staves (treble clef) play a melodic line with dynamics *p* and *mf*. The bottom two staves (bass clef) play a rhythmic accompaniment with dynamics *f* and *mf*.
- **Articulation:** Accents are used throughout the score to emphasize specific notes.
- **Fingerings:** Numbers 5, 7, 3, and 25 are indicated for specific notes or groups of notes.

228

Pno.1

Pno.2

ff

mf 5 *mp* 5

mf 7 *mp* 7

mf 3 *mp* 3

Pno.3

mf

mf

ff *mp*

230

pp 7

Pno.3

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