

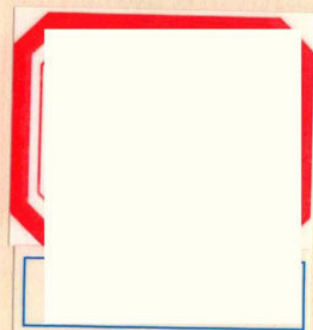


No. 6782

# JOHN CAGE

## ATLAS ECLIPTICALIS

Timpani 1





EDITION PETERS



INSTRUMENTAL PARTS TO BE PLAYED IN WHOLE OR PART IN ANY ENSEMBLE, CHAMBER OR ORCHESTRAL, WITH OR WITHOUT WINTER MUSIC

## TIMPANI 1 (BASS CLEF)

SEE "GENERAL DIRECTIONS"

FOR DAVID TUDOR

*John Cage*

MIDDLETOWN-STONY POINT, JUNE-DECEMBER 1961



General Directions

Each part has 4 pages. Each page has 5 systems. Space horizontally equals time as indicated by a conductor who performs a circle like that of a watch-hand. The four arrows of each system correspond to the 0", 15", 30", and 45" indications of the conductor. The fifth at 60" completes the system. The conductor's time will be at least twice as slow as clock time.

Space vertically equals frequency. Equal space is given each chromatic tone. Conventional points are marked  $\sharp$ ,  $\flat$  or  $\natural$ . The absence of such signs means that the tones are not at conventional points; the player is to use his eye with respect to the space to determine his action.

Events are single tones or aggregates-in-time (constellations). Two numbers above an event (or near it) tell: the first, how many notes are as short as possible; the second, how many have appreciable duration. The absence of numbers means all tones are as short as possible. A  $\odot$  means all have some duration. This may not exceed that of a breath or of a bow.

Within an aggregate space need not refer to time. Individual tones of an aggregate may appear in any succession. In parts permitting the playing of two or more at once (string and percussion parts) the player is free to make such combinations. He may also make interpenetrations of tones (e.g. producing a pizz. during the bowing of a tone, hitting an instrument during the resonance of another, etc.).

A silence takes place between tones, even two of the same aggregate, unless they are superimposed or interpenetrate. Melodic lines are not produced by the players individually. The player is under no obligation to play tones in rapid succession.

The loudness of tones is relative to their size. Thus, most tones are played softly.

No tones are to be played intermittently, nor is tone production extraordinary. Repetitions of tones within an aggregate may be made if the stem connecting the tones crosses through a note. In such a case, the repetition (if made) should follow intervening tones, and be short (if previously long) or long (if previously short).

Where changes are made from one instrument to another (e.g. from oboe to English horn, or from trumpet in B $\flat$  to one in D), make the change following the completion of an aggregate.

A performance may be at any point between minimum activity (silence) and maximum activity (what's written).

Directions for Percussion

Each part has four pages. Each page has five systems. Space horizontally equals time as indicated by a conductor who performs a circle like that of a watch-hand. The arrows of each system correspond to the 0", 15", 30", 45" and 60" indications of the conductor. The conductor's time will be at least twice as slow as clock-time.

The percussion parts graph the physical location of available instruments. These are placed in a semi-circle around the performer, are various, as numerous as possible, and not arranged according to relative pitch or timbre. The single line of the staff corresponds to straight - forward, below - to the left, above - to the right.

Events are single sounds or aggregates-in-time (constellations). Two numbers associated with an event tell: the first, how many notes are as short as possible; the second, how many have appreciable duration. The absence of numbers means all tones are as short as possible. A  $\odot$  means all have some duration. Sounds having length are rolls, fricative sounds, l.v., etc.

Within an aggregate space need not refer to time. Sounds of an aggregate may appear in any succession. Two or more may sound at once - be superimposed - or they may interpenetrate - one occurring during the resonance of another.

A silence takes place between sounds, even of the same aggregate, unless they are superimposed or interpenetrate. The player is under no obligation to play sounds in rapid succession.

The loudness of sounds is relative to their size. Most sounds are played softly.

Avoid noise-makers suggestive of specific things, beings or events. A tape machine (if tapes provided by the composer are available) or electronic instrument may be used.



Cartridges may be used. When the object inserted in the cartridge is changed, make such change following the completion of an aggregate (gain on the associated amplifier reduced to zero).

Repetitions of sounds within an aggregate may be made if the stem connecting the notes crosses through one of them. Such repetition (if made) should follow intervening sounds, and be short (if previously long) or long (if previously short).

A performance may be at any point between minimum activity (silence) and maximum activity (what's written).

#### Directions for Conductor and Assistant

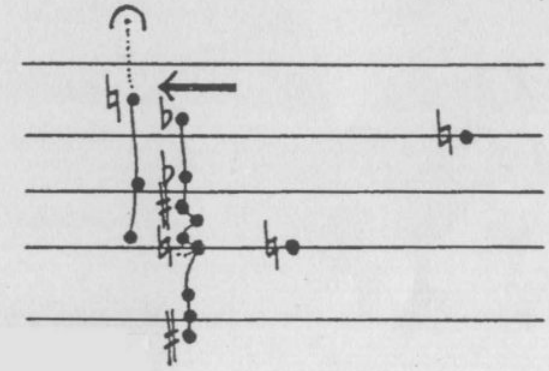
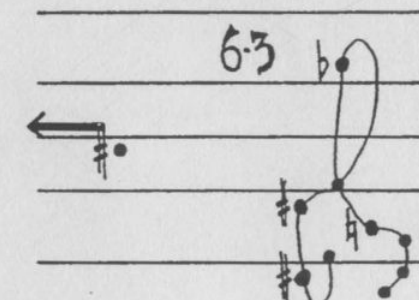
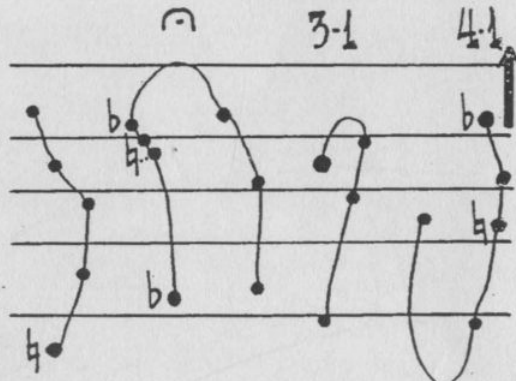
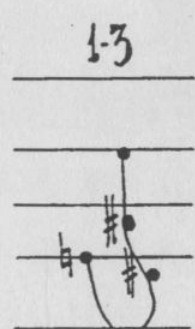
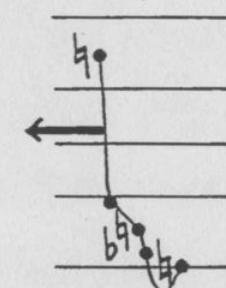
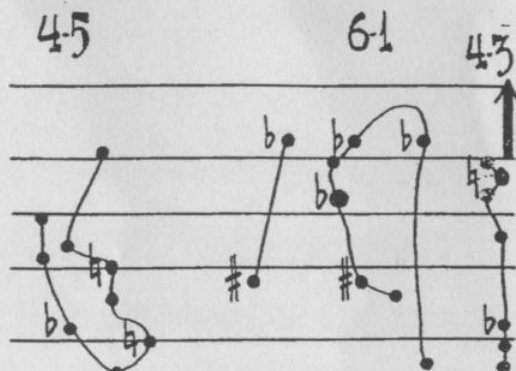
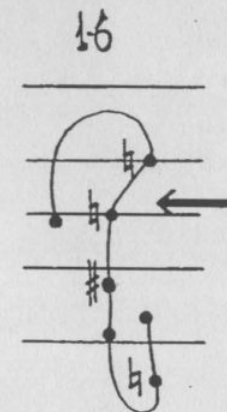
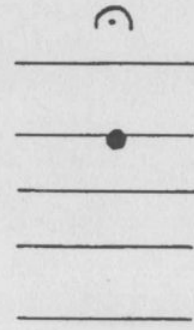
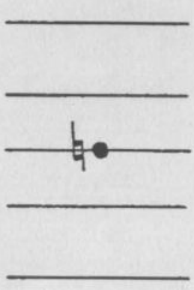
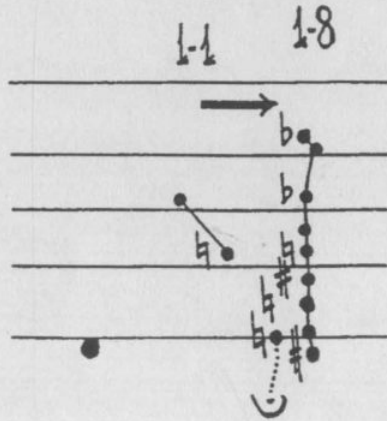
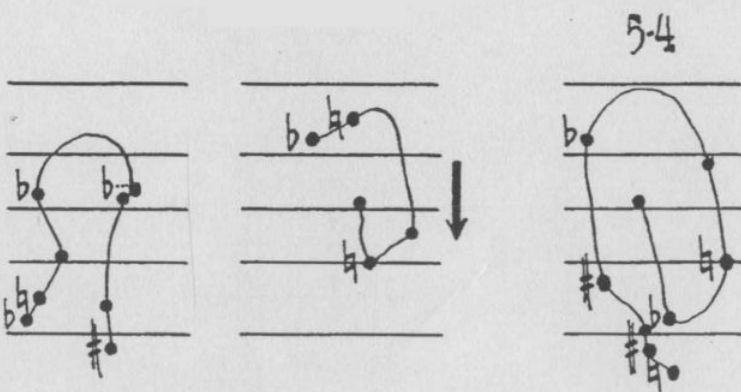
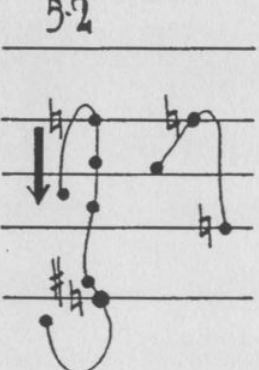
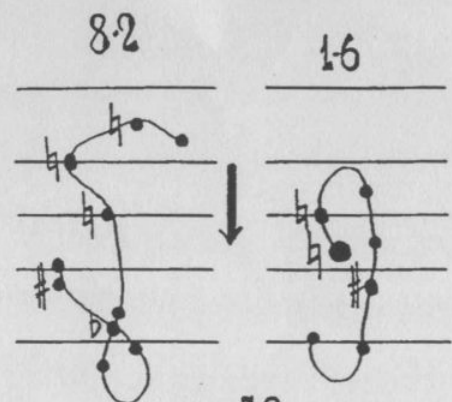
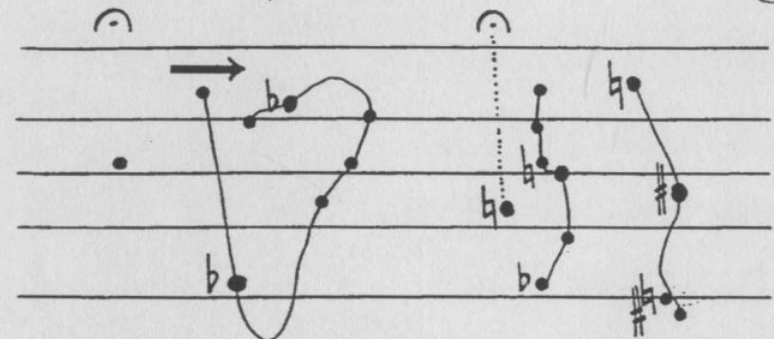
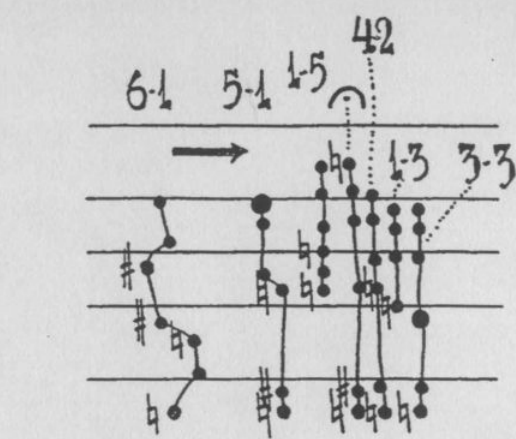
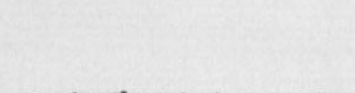
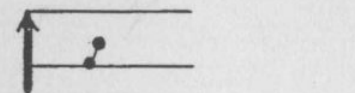
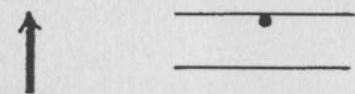
The conductor determines the length of a performance, and how much and which part of the composition - the same for all players - is to be performed. A system equals at least 2 minutes, - preferably more. (Extend the time to the point where the presence of silence is felt.) The conductor, however, performs a single clock-cycle for each system. At 0", 30", and 60" he makes changes of arm, at 15" and 45" changes of palm. From the last 30" to the end at 60", he uses both arms, fingers touching at the conclusion.

As many instruments as possible are to be equipped with contact microphones. These are connected to individual amplification systems and thence to individual loudspeakers. An assistant to the conductor prepares his own part from "Cartridge Music" for the operation of the dials (gain and tone control). Where the amplifiers exceed 20, he makes a drawing of the same size as those of "Cartridge Music" but having that number of shapes that there are amplifiers. Notes within shapes are gain, outside, tone control.

The composing means involved I-Ching operations together with the placing of transparent templates on the pages of an astronomical atlas and inscribing the positions of stars. I am grateful to Richard K. Winslow and to Toshi Ichiyanagi for assistance in the preparation of the parts.

J.C.                      New London, Connecticut

7/21/61





Handwritten musical notation on five-line staves, featuring various notes, accidentals, and fingerings. The notation is organized into several systems, each with an upward arrow on the left and a downward arrow on the right. Fingerings are indicated by numbers 1-5. Some systems include complex slurs and ties.

**System 1 (Top):** Upward arrow on the left, downward arrow on the right. Notes include a half note G4 and a quarter note F#4. Fingerings: 1-2, 1-8, 4-2, 1-8.

**System 2:** Upward arrow on the left, downward arrow on the right. Notes include a half note G4 and a quarter note F#4. Fingerings: 1-2, 1-8, 4-2, 1-8.

**System 3:** Upward arrow on the left, downward arrow on the right. Notes include a half note G4 and a quarter note F#4. Fingerings: 1-2, 1-8, 4-2, 1-8.

**System 4:** Upward arrow on the left, downward arrow on the right. Notes include a half note G4 and a quarter note F#4. Fingerings: 1-2, 1-8, 4-2, 1-8.

**System 5:** Upward arrow on the left, downward arrow on the right. Notes include a half note G4 and a quarter note F#4. Fingerings: 1-2, 1-8, 4-2, 1-8.

**System 6:** Upward arrow on the left, downward arrow on the right. Notes include a half note G4 and a quarter note F#4. Fingerings: 1-2, 1-8, 4-2, 1-8.

**System 7:** Upward arrow on the left, downward arrow on the right. Notes include a half note G4 and a quarter note F#4. Fingerings: 1-2, 1-8, 4-2, 1-8.

**System 8:** Upward arrow on the left, downward arrow on the right. Notes include a half note G4 and a quarter note F#4. Fingerings: 1-2, 1-8, 4-2, 1-8.

**System 9:** Upward arrow on the left, downward arrow on the right. Notes include a half note G4 and a quarter note F#4. Fingerings: 1-2, 1-8, 4-2, 1-8.

**System 10:** Upward arrow on the left, downward arrow on the right. Notes include a half note G4 and a quarter note F#4. Fingerings: 1-2, 1-8, 4-2, 1-8.

**System 11:** Upward arrow on the left, downward arrow on the right. Notes include a half note G4 and a quarter note F#4. Fingerings: 1-2, 1-8, 4-2, 1-8.

**System 12:** Upward arrow on the left, downward arrow on the right. Notes include a half note G4 and a quarter note F#4. Fingerings: 1-2, 1-8, 4-2, 1-8.

**System 13:** Upward arrow on the left, downward arrow on the right. Notes include a half note G4 and a quarter note F#4. Fingerings: 1-2, 1-8, 4-2, 1-8.

**System 14:** Upward arrow on the left, downward arrow on the right. Notes include a half note G4 and a quarter note F#4. Fingerings: 1-2, 1-8, 4-2, 1-8.

**System 15:** Upward arrow on the left, downward arrow on the right. Notes include a half note G4 and a quarter note F#4. Fingerings: 1-2, 1-8, 4-2, 1-8.

**System 16:** Upward arrow on the left, downward arrow on the right. Notes include a half note G4 and a quarter note F#4. Fingerings: 1-2, 1-8, 4-2, 1-8.

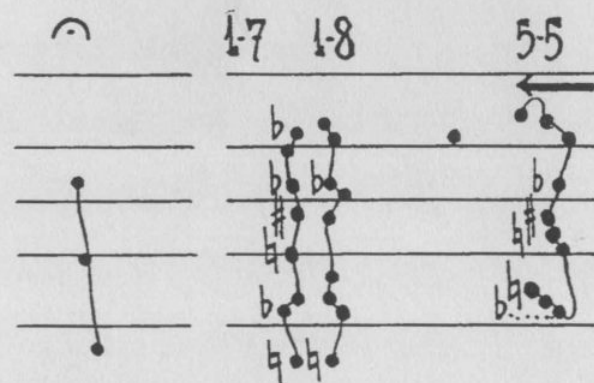
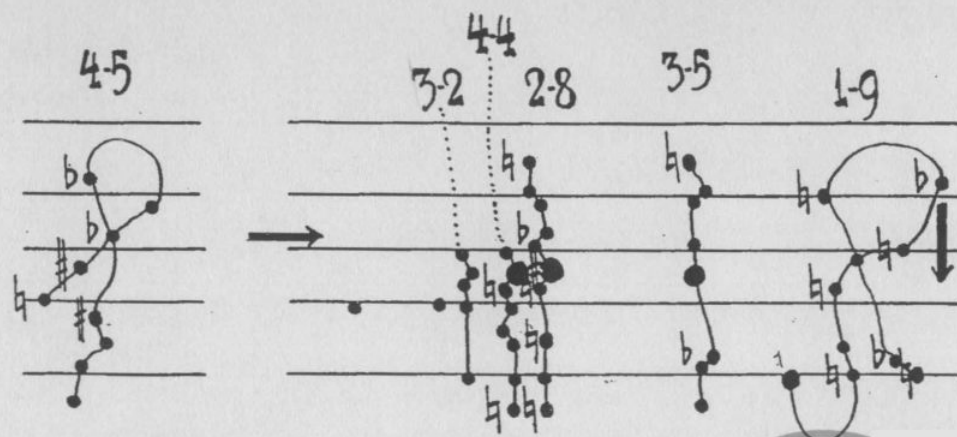
**System 17:** Upward arrow on the left, downward arrow on the right. Notes include a half note G4 and a quarter note F#4. Fingerings: 1-2, 1-8, 4-2, 1-8.

**System 18:** Upward arrow on the left, downward arrow on the right. Notes include a half note G4 and a quarter note F#4. Fingerings: 1-2, 1-8, 4-2, 1-8.

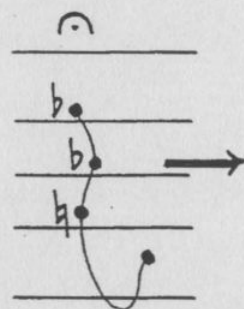
**System 19:** Upward arrow on the left, downward arrow on the right. Notes include a half note G4 and a quarter note F#4. Fingerings: 1-2, 1-8, 4-2, 1-8.

**System 20:** Upward arrow on the left, downward arrow on the right. Notes include a half note G4 and a quarter note F#4. Fingerings: 1-2, 1-8, 4-2, 1-8.

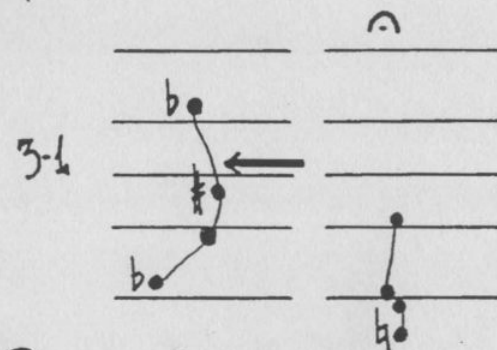
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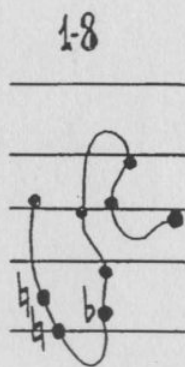
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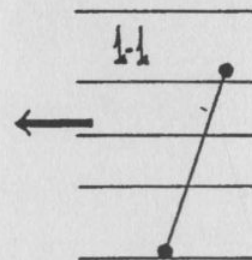
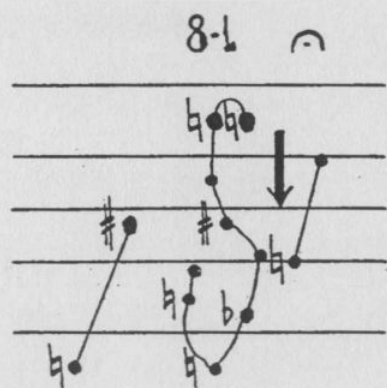
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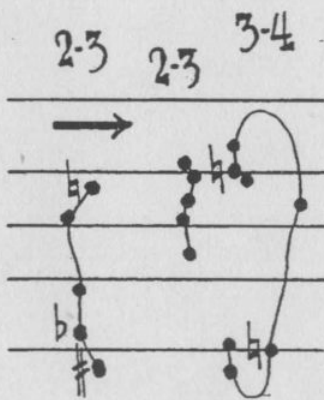


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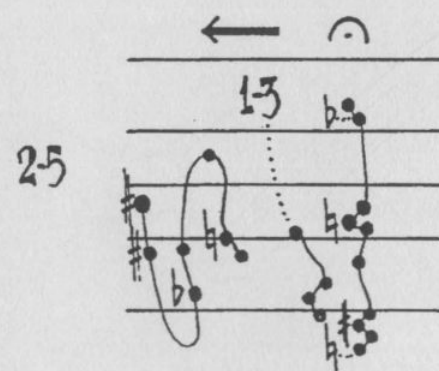
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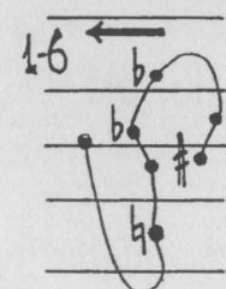
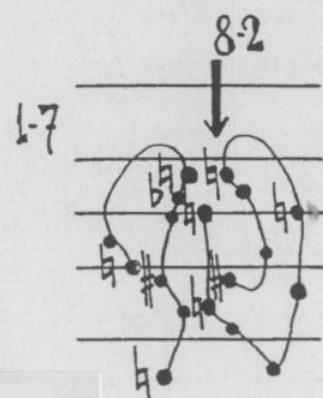


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The page contains several musical exercises on five-line staves, organized into a grid-like structure with vertical and horizontal arrows indicating the flow of the exercises.

**Top Row:**

- Exercise 1: A single staff with a flat (b) on the second line. An upward arrow is to the left, and a downward arrow is to the right.
- Exercise 2: A single staff with a flat (b) on the second line. An upward arrow is to the left, and an upward arrow is to the right.

**Second Row:**

- Exercise 3: A staff with a 5-5 fingering. An upward arrow is to the left, and a rightward arrow is to the right.
- Exercise 4: A staff with an 8-2 fingering and a 1-5 fingering. A downward arrow is to the left, and a downward arrow is to the right.
- Exercise 5: A staff with a 3-5 fingering. A leftward arrow is to the left, and an upward arrow is to the right.

**Third Row:**

- Exercise 6: A staff with a 7-3 fingering. An upward arrow is to the left, and a rightward arrow is to the right.
- Exercise 7: A staff with a 7-2 fingering and a 2-7 fingering. A leftward arrow is to the left, and an upward arrow is to the right.

**Fourth Row:**

- Exercise 8: A staff with a 6-1 fingering. A downward arrow is to the left, and a downward arrow is to the right.
- Exercise 9: A staff with a 1-1 fingering and a 5-2 fingering. A leftward arrow is to the left, and an upward arrow is to the right.

**Fifth Row:**

- Exercise 10: A staff with a 1-7 fingering and a 5-4 fingering. A rightward arrow is to the right.
- Exercise 11: A staff with a 6-2 fingering. A downward arrow is to the left, and a downward arrow is to the right.
- Exercise 12: A staff with a 2-8 fingering and a 6-4 fingering. A leftward arrow is to the left, and an upward arrow is to the right.

**Sixth Row:**

- Exercise 13: A staff with a 4-3 fingering. A leftward arrow is to the left, and an upward arrow is to the right.