

Spatial Arrangements with Simple Fractions and Mixed Numbers

Nemeth symbols and concepts addressed:

- Simple fraction
- Opening simple fraction indicator
- Horizontal fraction line
- Closing simple fraction indicator
- Mixed number
- Numeric indicator (non-use)
- Opening mixed number indicator
- Closing mixed number indicator
- Plus sign (+)
- Minus sign (–)

Objectives:

The student will be able to:

- 1) Read and write spatially aligned addition and subtraction problems containing simple fractions
- 2) Read and write spatially aligned addition and subtraction problems containing mixed numbers

Teaching tips:

- Before opening any BRF files in Duxbury, go into the Global menu. Select "Formatted Braille Importer" and then check the box for "Read formatted braille without interpretation" at the top of the window. This will ensure that nothing is changed when opening the BRF files.
- This focused lesson has one version and does not include variables.
- The lesson is limited to addition and subtraction problems, as it is very rare to multiply or divide fractions or mixed numbers using a spatial arrangement.
- Only horizontal fraction lines are shown to reduce the number of examples, but you could also use diagonal fraction lines.
- Please notice that the numeric indicator must not be used with the whole number in a spatial arrangement.
- In addition to the embedded activities within the focused lesson, there is one follow-up activity.

- The answers for the follow-up activity are available in simBraille and braille. Please note that these are not formatted in cell 1 with run-overs in cell 3 since the word "Answer" is included.
- If needed, remind the student to check his/her work during writing activities.
- You may want to have the student practice reading the spatial arrangements with fractions and mixed numbers as well. This can be done by using the answer key.

Materials Commercially Available:

Materials that could be used from the American Printing House for the Blind (www.aph.org) include

- Fractional Parts of Wholes Set (1-03290-00)
- *Unit 7: Fractions, Mixed Numbers, and Decimals (Student consumables for both kits are in braille):
 - Large Print Kit: (7-03564-00: Teacher's Guide in Large Print)
 - Braille Kit: (5-03564-00: Teacher's Guide in Braille)
- *Number Line Device (1-03480-01)
- Cranmer Abacus (1-03150-00)
- Large Abacus (1-03170-00)

* *WARNING: CHOKING HAZARD -- Small Parts. Not intended for children ages 5 and under without adult supervision.*

Other Optional Materials:

- Fraction cubes
- Fraction number lines
- Fraction tiles
- Fraction towers