

Mixed Number Problems in a Linear Format with Signs of Operation and Comparison

Nemeth symbols and concepts addressed:

- Mixed number
- Numeric indicator
- Opening mixed number indicator
- Horizontal fraction line
- Diagonal fraction line
- Closing mixed number indicator
- Plus sign (+)
- Minus sign (–)
- Multiplication cross (×)
- Multiplication dot (•)
- Division (divided by) sign (÷)
- Equals sign (=)
- Less than sign (<)
- Greater than sign (>)

Objectives:

The student will be able to:

- 1) Read and write problems containing mixed numbers and signs of operation
- 2) Read and write problems containing mixed numbers and signs of comparison
- 3) Read and write problems containing mixed numbers involving both signs of operation and signs of comparison

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.
- 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.
- The majority of mixed numbers are written with a horizontal fraction line, and teachers tend to encourage students to write mixed numbers using one as well, whether in print or braille. The use of a horizontal fraction line is the preferred method.
- Mixed numbers with diagonal fraction lines occasionally appear in textbooks, on assessments, or in other math materials. Therefore, we have included mixed numbers with a diagonal fraction line where the numerator is raised higher than the denominator. We have chosen not to include mixed numbers with a diagonal fraction line where the numerator is not raised higher than the denominator, as these are extremely rare and their use is discouraged.
- If needed, remind the student to check his/her work during writing activities.
- You may want to have the student practice reading the mixed numbers with signs of operation and comparison 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