Simple Fractions with Signs of Operation and Comparison

Background

After completing the *1. How to Read and Write a Simple Fraction* focused lesson, you are ready to learn how to use simple fractions with signs of operation and comparison in a linear format. As a quick review, fractions with a horizontal fraction line use the following Nemeth symbols:

 (dots 1-4-5-6) opening simple fraction indicator

 (dots 3-4) horizontal fraction line

 (dots 3-4-5-6) closing simple fraction indicator

So to write the simple fraction $\frac{1}{8}$ in Nemeth Code, you would write:

 or opening simple fraction indicator, one, horizontal fraction line, eight, closing simple fraction indicator. Notice that the **numerator** of 1 is to the left of the fraction line, and the **denominator** of 8 is to the right.

Basic Rules for Writing Problems with Simple Fractions and Signs of Operation

In this lesson, we will first learn how to write problems that contain simple fractions with one of the four basic operation signs: addition, subtraction, multiplication, and division. The four basic operations use the following Nemeth symbols:

 (dots 3-4-6) plus sign (+)

 (dots 3-6) minus sign (−)

 (dot 4, dots 1-6) multiplication cross (×)

 (dots 1-6) multiplication dot (·)

 (dots 4-6, dots 3-4) division (divided by) sign (÷)

When writing a problem that contains two simple fractions with an operation sign between them, you would write the first fraction, immediately followed by the operation sign, immediately followed by the second fraction as one continuous flow of braille cells. There would be no spaces.

Examples

1. $\frac{3}{4} + \frac{1}{4}$ three-fourths plus one-fourth

2. $\frac{5}{8} \div \frac{3}{8}$ five-eighths divided by three-eighths

3. $\frac{33}{100} - \frac{11}{50}$ thirty-three hundredths minus eleven-fiftieths

4. $\frac{5}{7} \times \frac{7}{8}$ five-sevenths times (multiplication cross) seven-eighths

5. $\frac{21}{50} \cdot \frac{25}{63}$

twenty-one fiftieths times (multiplication dot) twenty-five sixty-thirds

Activity time: See if you can re-create the problems in examples 1 to 5.

Basic Rules for Writing Problems with Simple Fractions and Signs of Comparison

Next, we will learn how to write simple fractions using one of the three basic comparison signs: the equals sign, less than sign, and greater than sign. These three basic comparison signs use the following Nemeth symbols:

 (dots 4-6, dots 1-3) equals sign (=)

 (dot 5, dots 1-3) less than sign (<)

 (dots 4-6, dot 2) greater than sign (>)

When writing two simple fractions with a sign of comparison between them, you would write the first fraction, space, the comparison sign, space, and

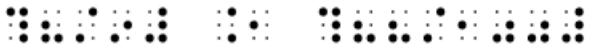
then the second fraction. Unlike a sign of operation, there should be a space on either side of a comparison symbol in Nemeth Code.

Examples

6. $\frac{1}{3} < \frac{2}{3}$ One-third is less than two-thirds.

7. $\frac{4}{7} = \frac{12}{21}$ Four-sevenths equals twelve twenty-firsts.

8. $\frac{8}{9} > \frac{88}{100}$ Eight-ninths is greater than eighty-eight hundredths.



Activity time: See if you can re-create the problems in examples 6 to 8.

Problems Involving Fractions with Both Signs of Operation and Signs of Comparison

Finally, let's take a look at a couple of fraction problems involving both a comparison sign and one or more operation signs.

Examples

9. $\frac{1}{5} + \frac{6-2}{5} = 1$

One-fifth plus open fraction six minus two over five close fraction equals one.

10. $\frac{63}{100} \cdot \frac{25}{84} > \frac{1}{16}$

Sixty-three hundredths times (multiplication dot) twenty-five eighty-fourths is greater than one-sixteenth.

Activity time: See if you can re-create the problems in examples 9 and 10.