

How to Read and Write a Simple Fraction

Background

A **fraction** simply describes how many parts of a whole we have. If you divided one whole pizza into eight equal pieces, and you and your friends ate seven of those pieces, then you would have one piece left or one out of eight. This is described as the fraction $\frac{1}{8}$, or one-eighth of the pizza.

When writing a fraction, you have two parts. The **denominator** represents the total number of parts the whole has been divided into and the **numerator** represents the number of these parts that we have.

So in the fraction $\frac{1}{8}$, 1 is the numerator and 8 is the denominator. In print, this is usually written with the numerator on the top and the denominator on the bottom with a horizontal bar between them. However, in the Nemeth Code, we do not have "tops" and "bottoms" for fractions. We have "lefts" and "rights" because the numerator is written to the left of the fraction line and the denominator is written to the right of the fraction line.

Basic Rules for Writing a Simple Fraction

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.

Examples

1. $\frac{3}{4}$ three over four or three-fourths

⠠⠠⠠⠠⠠⠠⠠⠠

2. $\frac{5}{8}$ five over eight or five-eighths



3. $\frac{33}{100}$ thirty-three over one hundred or thirty-three hundredths



Activity time: See if you can re-create the fractions in examples 1 to 3.

The numerator and denominator don't always have to be a specific number. We could have an unknown number in either the numerator or the denominator or both. These unknown numbers are written as letters, called **variables**, and could even have **subscripts** – symbols that appear below the baseline in print.

Examples with Variables

4. $\frac{3}{y}$ three over y or open fraction three over y close fraction



5. $\frac{x}{y}$ x over y or open fraction x over y close fraction



6. $\frac{y_2 - y_1}{x_2 - x_1}$

open fraction y sub two minus y sub one over x sub two minus x sub one close fraction



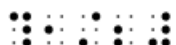
Activity time: See if you can re-create the fractions with variables in examples 4 to 6.

Basic Rules for Reading a Simple Fraction

When you read simple fractions with numbers in the numerator and denominator, you read the numerator as a regular number, but you often read the denominator as an **ordinal number** – the numbers you use when you are putting things in order. There are a few exceptions though.

Examples

7. $\frac{1}{2}$ would be read: one over two or one-half.



8. $\frac{1}{3}$ would be read: one over three or one-third.

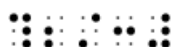


9. $\frac{1}{4}$ would be read: one over four or one-fourth or sometimes one quarter.



If the numerator is more than one, then the denominator needs to be plural.

10. $\frac{2}{3}$ would be read: two over three or two-thirds.



11. $\frac{3}{2}$ would be read: three over two or three-halves.



Did you notice this is an improper fraction? An **improper fraction** is one where the numerator is greater than or equal to the denominator.

12. $\frac{3}{4}$ would be read: three over four or three-fourths.



Examples with Variables

could be read: three over y or open fraction three over y close fraction
or the fraction with numerator three and denominator y.

