Master Comparing Unit Fractions

Rationale

In this step, pupils begin to understand unit fractions as numbers on the number line. They learn that unit fractions, with a numerator of 1, represent a single part of a whole, and their size in relation to the whole is determined by the denominator. Pupils identify and represent unit fractions on number lines, drawing upon these to compare the relative size of two unit fractions. They will learn that the greater the denominator, the smaller the unit fraction as there are more equal parts to which a whole is divided and vice-versa.

Pupils will apply their knowledge to compare two unit fractions presented abstractly.

Key Stem Sentences

- The whole is divided into ___ equal parts. The unit fraction is ___.
- The _____ the denominator, the _____ the unit fraction.
- ___ is greater / less than / equal to ___

Key Vocabulary

- unit fraction / numerator / denominator
- part / whole
- compare
- greater than (>) / less than (<) / equal to (=)

Common Errors or Misconceptions

- Pupils may think that the greater the denominator, the greater the unit fraction.
- Pupils may think that all unit fractions are represented in the same position on a number line.

Key Representations

Number Lines

The whole is divided into 3 equal parts. The unit fraction is $\frac{1}{3}$

$\frac{1}{7}$ is greater than $\frac{1}{8}$
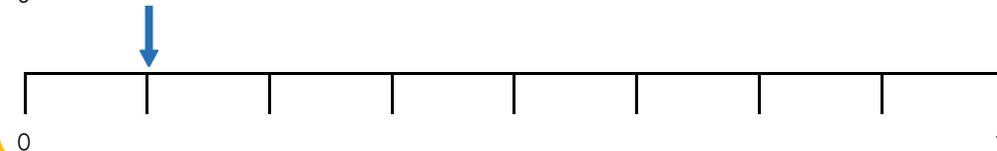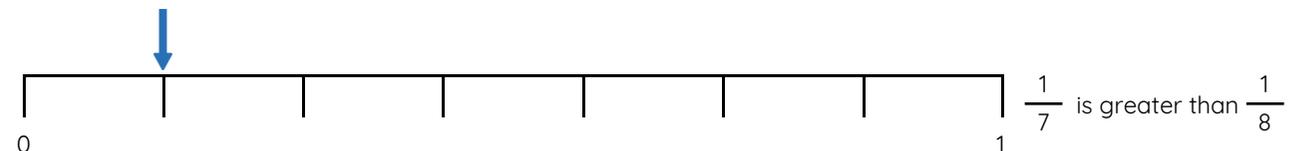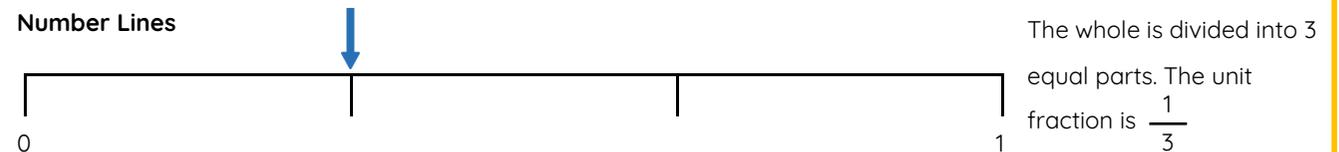
Pupils will FLOURISH if they can...

- identify and represent unit fractions on number lines.
- accurately compare the relative sizes of two unit fractions using inequality symbols.
- understanding the significance of the denominator in determining the size of the unit fraction.
- begin to explain their understanding using 'Decide, Assess, Back up', given stems and mathematical proof.