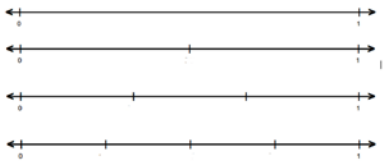
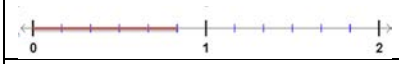
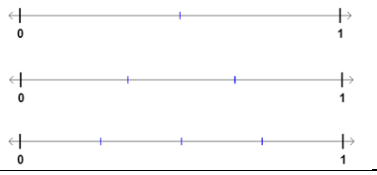
Content Standard	***MAFS.3.NF*** *Number and Operations – Fractions* ***MAFS.3.NF.1*** *Develop understanding of fractions as numbers.* **MAFS.3.NF.1.2** Understand a fraction as a number on the number line; represent fractions on a number line diagram. **MAFS.3.NF.1.2a** Represent a fraction $\frac{1}{b}$ on a number line diagram by defining the interval from 0 to 1 as the whole and partitioning it into *b* equal parts. Recognize that each part has size $\frac{1}{b}$ and that the endpoint of the part based at 0 locates the number $\frac{1}{b}$ on the number line. **MAFS.3.NF.1.2b** Represent a fraction $\frac{a}{b}$ on a number line diagram by marking off *a* lengths $\frac{1}{b}$ from 0. Recognize that the resulting interval has size $\frac{a}{b}$ and that its endpoint locates the number $\frac{a}{b}$ on the number line.
Assessment Limits	Denominators limited to 2, 3, 4, 6, 8. Models restricted to number lines starting at 0. • Part A: number line interval from 0 to 1. • Part B: number lines can extend from 0 to 1+.
Calculator	No
Acceptable Response Mechanisms	Equation Response Graphic Response – Drag and drop, Drawing/Graphing, Hot Spot Multiple Choice Response Multi-Select Response
Context	No context
Example	
Context	Recognize and represent unit fractions and non-unit fractions on number lines: • Number lines limited to the interval 0 to 2 • Unit fractions and non-unit fractions less than 1 with denominators of 2, 3, 4, 6, 8 • Non-unit fractions greater than 1 limited to halves and fourths • 1 -2 fractions represented or referenced in the item
Context easier	Given number lines limited to the interval 0 to 1 with scale increments of halves, thirds, and fourths. Unit fractions and non-unit fractions less than 1 limited to $\frac{1}{2}$, $\frac{1}{3}$, and $\frac{1}{4}$. Only 1 fraction represented or referenced in the item.
Context more difficult	Number lines can extend beyond the interval 0 to 2. Any fraction less than or greater than 1 with denominator 2, 3, 4, 6 or 8. More than 2 fractions may be represented or referenced in the item.

Sample Item Stem	Response Mechanism	Notes, Comments
Which number line is divided into thirds? 	Multiple Choice Response	
Which fraction is represented by the total length marked on the number line shown? 	Equation Response	
What fraction is represented by the length marked on the number line shown? 	Equation Response	
What fraction is represented by the total length marked on the number line? 	Equation Response	
Look at the number lines shown. Select the number line that can be used to correctly plot the fraction $\frac{3}{4}$. Then, correctly plot the fraction on the selected number line. 	Graphic Response – Drag and Drop, Hot Spot	