

# Master The Number Line with Fractions Less Than 1

## Rationale

In this step, pupils build upon their understanding of fractions less than 1. They will use their knowledge of equivalent fractions to accurately identify and label fractions on a number line to 1. For example, when there are 3 intervals on the number line, the value of each interval is one-third. Pupils learn to recognise this as two-sixths, three-ninths and so on. Pupils will develop their learning by identifying, labelling and estimating the position of fractions on a number line where equivalent fractions fall between intervals. For example, when there are 3 intervals on the number line, fractions such as one-ninth and one-sixth will fall between the intervals of 0 and one-third.



## Key Stem Sentences

- The value of each interval is \_\_\_\_ or \_\_\_\_
- There are \_\_\_\_ intervals on the number line. The value of each interval is \_\_\_\_ or \_\_\_\_
- \_\_\_\_ is here on the number line.



## Key Vocabulary

- equivalent
- fraction
- interval
- mid-point



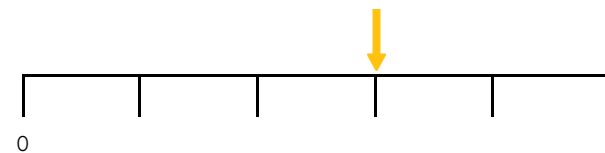
## Common Errors or Misconceptions

- Pupils may miscount the intervals.
- Pupils may represent the fractions incorrectly.
- Pupils may not estimate the positions of equivalent fractions between intervals accurately.



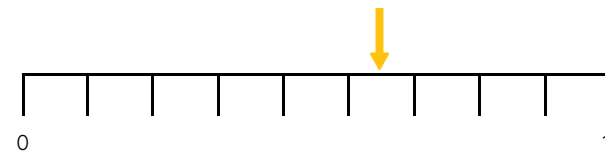
## Key Representations

### Number lines



The value of each interval is one-fifth or three-fifteenths.

$\frac{3}{5}$  or  $\frac{9}{15}$  is here on the number line.



There are 9 intervals on the number line.

The value of each interval is one-ninth or two-eighteenths.  
 $\frac{11}{18}$  is here on the number line.



## Pupils will FLOURISH if they can...

- use their understanding of equivalent fractions to recognise the different values of intervals on a number line.
- identify, label and estimate fractions, including equivalent fractions, on a number line.
- begin to explain their understanding using their own words and representations.

