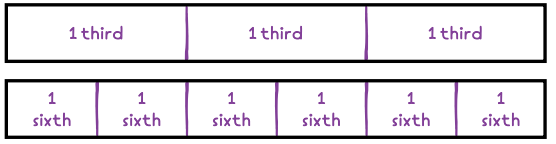
Why

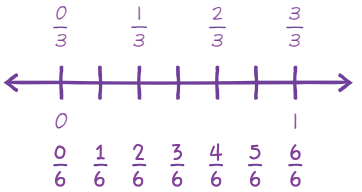
Fractions as Numbers

How does the curriculum support students in partitioning fraction models with a sufficient degree of precision?

Students are expected to estimate, rather than measure, the placement of lines and tick marks when partitioning fraction models. The relationships between fractional units (e.g., halves, fourths, and eighths; thirds and sixths; and fifths and tenths) is established and reinforced throughout the module.



Students first partition 1 whole into fractional units by using a fraction strip that they fold into equal parts. From this experience, students begin to recognize the relationships between fractional units. For example, folding halves in half makes fourths, and folding fourths in half makes eighths. In later lessons, they extend this thinking to partitioning a number line. Partitioning strategies such as making fourths by making halves of halves are explicitly taught, and problems are intentionally sequenced to use the connections between related units (i.e., halves, fourths, and eighths; thirds and sixths; and fifths and tenths). Students are supported in reasoning about how many tick marks they should make between whole numbers before partitioning them. Units that are often more difficult to estimate, such as fifths, sevenths, ninths, and tenths, are used sparingly.



To support them in partitioning fraction models, students are generally provided with a drawing of the model to partition. The drawings are large enough that a slightly imprecise partition should be sufficiently close for students to see and be able to describe the relationship between the quantities. Most of the models that students are asked to partition are rectangular or linear (e.g., number lines). Nonrectangular models, including circles, are generally pre-partitioned for students.