Find 2/3

Task

Label the point where $\frac{2}{3}$ belongs on the number line. Be as exact as possible.

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Commentary

This simple-looking problem reveals much about how well students understand unit fractions as well as representing fractions on a number line.

First students must locate 1 by repeatedly marking off the length of the interval between 0 and $\frac{1}{4}$, recognizing that $\frac{4}{4} = 1$. Students must then partition the interval between 0 and 1 into 3 equal parts and identify which of those points represent $\frac{2}{3}$.

Many students will find it easier to do this on two separate number lines, but a few may be able to do it on a single number line. The solutions below reflect these two approaches.

The following lists related tasks in order of sophistication:

- Locating Fractions Less than One on the Number Line
- Locating Fractions Greater than One on the Number Line
- Closest to $\frac{1}{2}$
- Find 1
- Find $\frac{2}{3}$
- Which is Closer to 1?

Solutions

Solution: Two number lines

Students may choose to label none, some or all of the points they find on the number line on the way to solving the problem. A correct solution only requires that the point $\frac{2}{3}$ be labeled.

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Solution: One number line

Students may choose to label none, some or all of the points they find on the number line on the way to solving the problem. A correct solution only requires that the point $\frac{2}{3}$ be labeled.

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