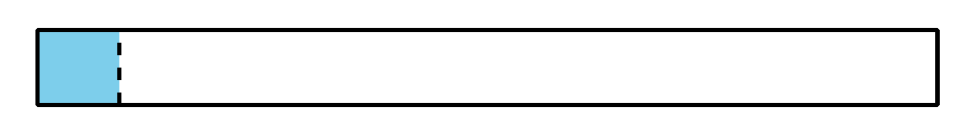
## Lesson 8: Equivalent Fractions on the Number Line

* Let’s use number lines to reason about equivalent fractions.

### Warm-up: Estimation Exploration: A Shaded Portion

If the entire diagram represents 1 whole, about what fraction is shaded?

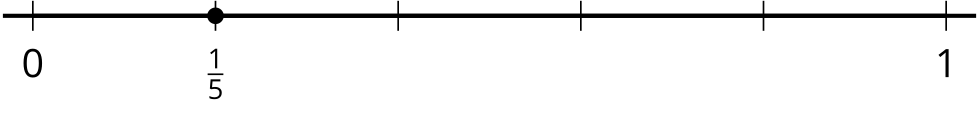


Make an estimate that is:

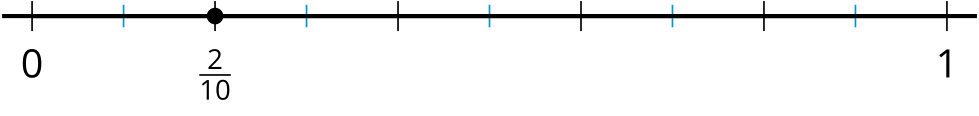
|  |  |  |
| --- | --- | --- |
| too low | about right | too high |
|  |  |  |

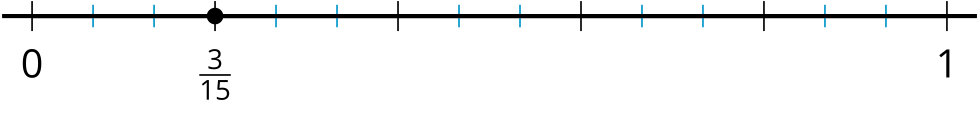
### 8.1: Handy Number Lines

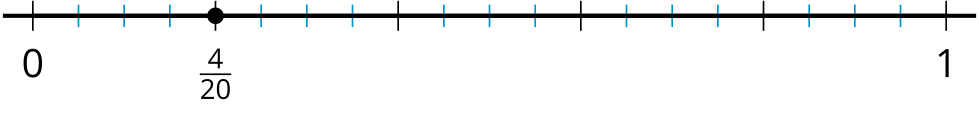
Andre used number lines to find fractions that are equivalent to . He drew this number line:



Then, he drew three more lines and wrote a fraction for the point on each line:



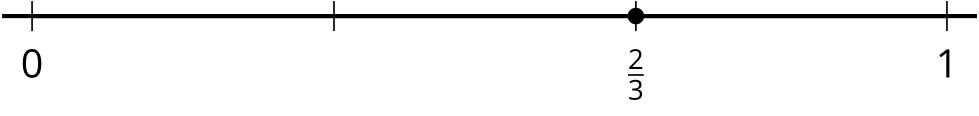
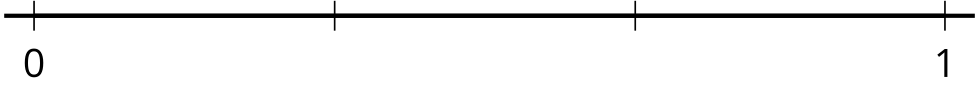
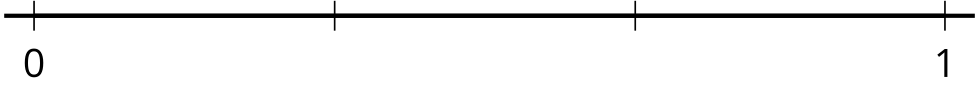
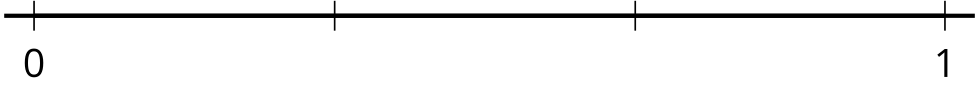




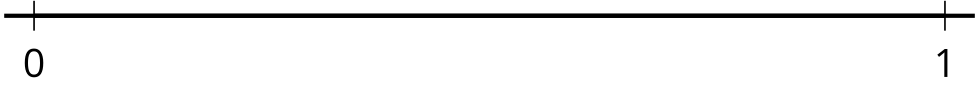
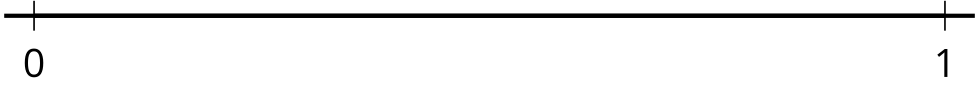
1. How did Andre use the number lines to find fractions equivalent to ? Explain your thinking to a partner.
2. How can number lines be used to show whether the following fractions are equivalent?
   1. and
   2. and
3. Find three fractions that are equivalent to . Explain or show how Andre’s number lines can help.

### 8.2: Can It Be Done?

1. Priya wants to find fractions that are equivalent to , other than . She wonders if she can find equivalent fractions with denominator 9, 10, and 12.

* Can it be done? Use number lines to show your reasoning.
* 
* 
* 
* 

1. Represent on a number line. Then, find two fractions that are equivalent to . How would you use the number line to show that they are equivalent to ?

* 
* 

1. Can you find an equivalent fraction for with 100 for the denominator? Explain or show your reasoning.



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