LESSON MAKER PRO

First Tick Fractions

Find unit fractions on number lines.

GRADE 3 · 3.NF.A.2a

CCSS.Math.Content.3.NF.A.2a "Represent a fraction 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..."

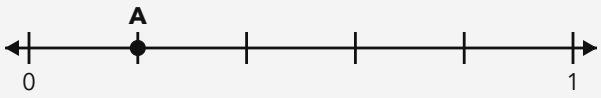
NAME _____ DATE _____

START AT ZERO

The distance from 0 to 1 is one whole. When that whole is split into b equal parts, each part is 1/b. The first endpoint after 0 shows 1/b.

WORKED EXAMPLE

Look at point A on the number line. What fraction names point A?

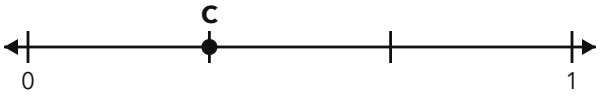


1. The interval from 0 to 1 is one whole.
2. Count 5 equal intervals in the whole.
3. Each interval has size 1/5.
4. Point A is at the end of the first interval after 0.

Answer: A = 1/5

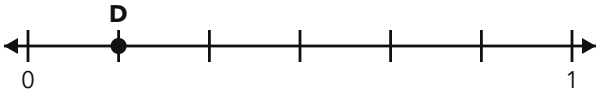
PRACTICE 6 problems

1 Look at point C on the number line. What fraction names point C?



ANSWER _____

2 Look at point D on the number line. What fraction names point D?



ANSWER _____

3 A whole interval from 0 to 1 is split into 4 equal parts. What is the size of each part?

ANSWER _____

4 A whole interval from 0 to 1 is split into 8 equal parts. What fraction is at the first endpoint after 0?

ANSWER _____

5 A whole interval from 0 to 1 is split into 9 equal parts. Jada writes 1/9 at the first endpoint after 0. Is Jada correct? Write yes or no.

ANSWER _____

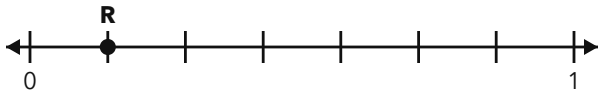
6 A whole interval from 0 to 1 is split into 2 equal parts. Explain why the first endpoint after 0 is 1/2.

ANSWER _____

_____

APPLY IT Show your work

1 At coding club, a robot travels on a track from 0 to 1. The track is split into 7 equal sections. The robot stops at point R. What fraction of the track has the robot traveled?



ANSWER _____

2 A game progress bar goes from 0 to 1 and is split into 10 equal sections. A player reaches the first divider after 0. What fraction of the game is complete?

WORK SPACE

ANSWER _____

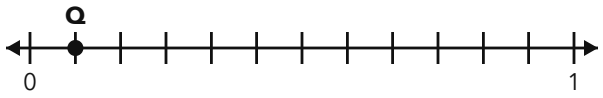
3 Draw a straight number line in the work space and label its two endpoints 0 and 1. Treat the entire interval from 0 to 1 as one whole. Draw three equally spaced interior tick marks to partition it into four equal parts. Mark point P at the endpoint of the first part starting at 0, and label P with its fraction. Explain the size of each part and why P has that value. Use a ruler or fold a same-length paper strip to help make equal spacing; you must draw the marks and point.

WORK SPACE

ANSWER _____

CHALLENGE One step up

Look at point Q on the number line. Kai says Q is 1/12. Lee says Q is 1/11 because there are 11 tick marks between 0 and 1. Who is correct? Explain your reasoning.



WORK SPACE AND ANSWER

ANSWER KEY

First Tick Fractions

GRADE 3 · 3.NF.A.2a

PART 1 · PRACTICE

#	PROBLEM	ANSWER
1	Look at point C on the number line. What fraction names point C?	**1/3**
2	Look at point D on the number line. What fraction names point D?	**1/6**
3	A whole interval from 0 to 1 is split into 4 equal parts. What is the size of each part?	**1/4**
4	A whole interval from 0 to 1 is split into 8 equal parts. What fraction is at the first endpoint after 0?	**1/8**
5	A whole interval from 0 to 1 is split into 9 equal parts. Jada writes 1/9 at the first endpoint after 0. Is Jada correct? Write yes or no.	**Yes**
6	A whole interval from 0 to 1 is split into 2 equal parts. Explain why the first endpoint after 0 is 1/2.	**The whole is split into 2 equal parts. Each part is 1/2, so the first endpoint after 0 is 1/2.**

PART 2 · APPLY IT

1. **1/7** The whole track is divided into 7 equal sections. Point R is at the end of the first section, so it is 1/7.
2. **1/10** The whole progress bar has 10 equal sections. The first section has size 1/10.
3. **P = 1/4; each of the four equal intervals is 1/4 of the whole.** Check the actual number line has three evenly spaced interior marks, making four equal intervals between 0 and 1. P is at the first interior mark, labeled 1/4. Accept small drawing inaccuracies if equal-spacing intent is clear, but require an actual partition and point.

CHALLENGE

Kai is correct. The whole is divided into 12 equal intervals, so the first interval and its endpoint have value 1/12.

Accept equivalent wording that states the whole is split into the denominator number of equal parts and the first part has that unit-fraction size. For the challenge, students must identify Kai and connect 12 equal intervals to 1/12. Apply 3 requires the learner-made equal partition, point and explanation. Endpoint-only tick labels avoid rounded-decimal crowding while preserving every original tick and point.

First Tick Fractions

Apply 3: a completed four-part whole, with P at the first endpoint after 0.

