

Locate Fractions on a Number Line

4.3(G) Represent fractions and decimals to the tenths or hundredths as distances from zero on a number line.

Understand the TEKS

You can use a **number line** to show **fractions**. A fraction is a number that shows part of a whole.

Some points on a number line show the location of whole numbers. Fractions fall between whole numbers. For example, fractions greater than 0 but less than 1 fall between the whole numbers 0 and 1 on a number line.



Did You Know?

NUMBER SENSE

A number line can model a fraction because the tick marks between whole numbers show parts of a whole number.

On the number line below, point P represents a park. The park is $\frac{3}{5}$ mile from the bridge. The park is $\frac{9}{5}$ mile from the fishing hole. Which points on the number line represent the bridge and the fishing hole?

- Step 1** Use a model to show the fractions between 0 and 2.
Label each tick mark with a fraction with a denominator of 5.



- Step 2** Find the points that represent the bridge and the fishing hole.

How far is the park from the bridge? _____

The bridge is at point _____.

How far is the park from the fishing hole? _____

The fishing hole is at point _____.

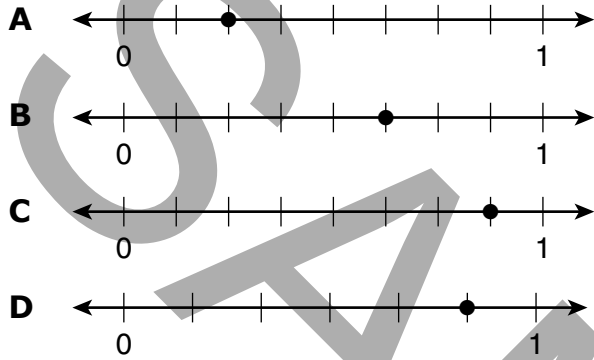
Which points on the number line represent the bridge and the fishing hole?



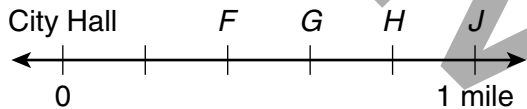
★ Practice

DIRECTIONS Read each question. Then circle the letter for the correct answer.

1 Henry runs $\frac{3}{8}$ mile and then walks $\frac{2}{8}$ mile farther. Which point represents Henry's total distance?



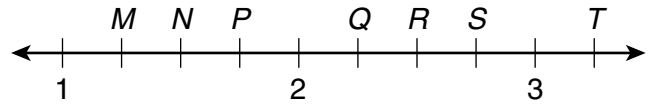
2 Larry works $\frac{4}{5}$ mile from City Hall.



Which point on the number line represents where Larry works?

- F** F
- G** G
- H** H
- J** J

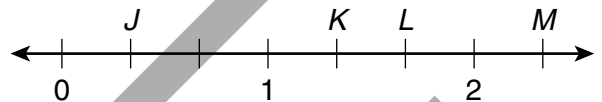
3 Michael needs to cut a rod $\frac{11}{4}$ feet long.



Which point shows $\frac{11}{4}$?

- A** Point P, because it is 3 units away from 1
- B** Point Q, because it is 1 unit away from 2
- C** Point S, because it is 3 units away from 2
- D** Point T, because it is 1 unit away from 3

4 Michelle plays card games for $\frac{4}{3}$ hours.



She says that point M represents this amount of time. Is she correct?

- F** Yes, because the line is divided into thirds
- G** Yes, because the numerator is greater than the denominator
- H** No, because M should be the same distance from 2, but on the other side
- J** No, because M is more than 4 tick marks from 0