



TABE Math-E

PAXEN

Unit-4 Fractions

Lesson 25

Fractions on a Number Line

Revised: October 16, 2023

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Some graphics may not have copied well during the scan process.

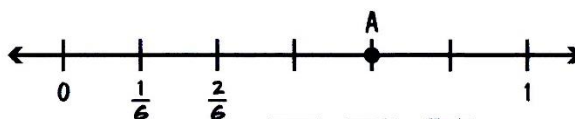
Math-E - Lesson 25 – Fractions of a Line

Lesson 25 Fractions on a Number Line

3.NF.2.a – Medium, 3.NF.2.b – Medium

Just as you can use a number line to locate whole numbers, you can also use a number line to locate fractions. The distance between 0 and 1 on the number line represents one whole. When that whole is divided into equal pieces, those pieces represent fractions. If the distance between 0 and 1 is divided into 6 equal sections, then each section represents a sixth. The endpoint of each section can be labeled $\frac{1}{6}$, $\frac{2}{6}$, $\frac{3}{6}$, and so on. 1 represents $\frac{6}{6}$.

Example What fraction is located at Point A on the number line?



1) Determine how many parts the number line is divided into.

The number line is divided into sixths.

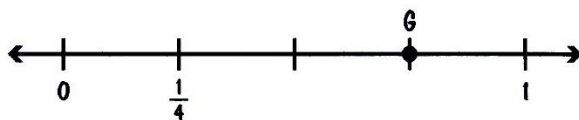
2) Label each endpoint with its fractional value.

Each endpoint will be labeled starting with $\frac{1}{6}$, $\frac{2}{6}$, $\frac{3}{6}$, and so on.

So, the fraction located at Point A is $\frac{4}{6}$.

Test Example

1. What fraction names the distance between 0 and Point G on the number line?



A. $\frac{1}{4}$

B. $\frac{2}{4}$

C. $\frac{3}{4}$

D. $\frac{4}{4}$

1. C The number line is divided into fourths. The distance between 0 and Point G on the number line is $\frac{3}{4}$. $\frac{1}{4} + \frac{1}{4} + \frac{1}{4} = \frac{3}{4}$.

Hint

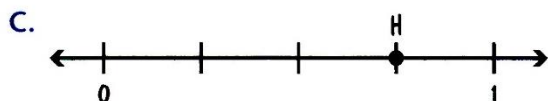
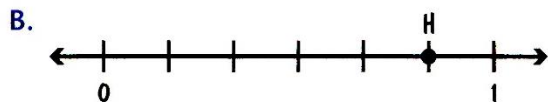
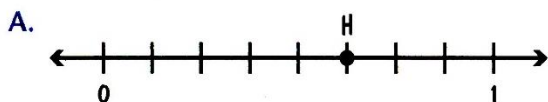
Use a fraction number line as you would a whole number line. The numbers continue in both directions.

Math-E - Lesson 25 – Fractions of a Line

Practice

Read each question. Select the correct answer.

- 1 Which number line shows Point H located at $\frac{5}{6}$?



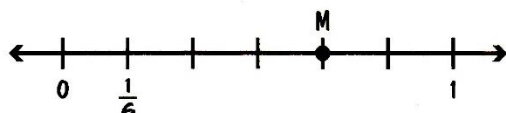
- 2 What is the distance between 0 and Point K on the number line?



A. 0 B. $\frac{2}{4}$

C. $\frac{2}{3}$ D. 1

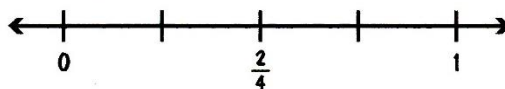
- 3 Where is Point M located on the number line?



A. $\frac{5}{6}$ B. $\frac{4}{6}$

C. $\frac{5}{8}$ D. $\frac{4}{8}$

- 4 What does each section of the number line represent?



A. $\frac{1}{3}$ B. $\frac{1}{4}$

C. $\frac{1}{5}$ D. $\frac{1}{6}$

- 5 How many eighths are represented by Point N ?



A. 2 B. 3

C. 4 D. 5

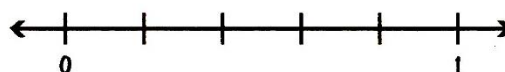
- 6 Which point is located at $\frac{3}{6}$?



A. Point A B. Point B

C. Point C D. Point D

- 7 What does each section of the number line represent?



A. a third B. a fourth

C. a fifth D. a sixth

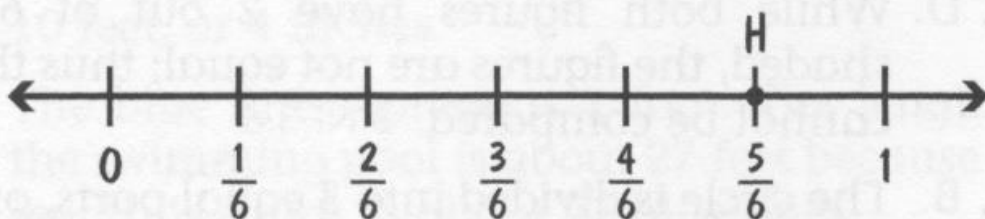
Math-E - Lesson 25 – Fractions of a Line

Lesson 25

Fractions on a Number Line

(3.NF.2.a, 3.NF.2.b)

1. B.



The section from 0 to 1 is divided into 6 equal pieces, so each piece represents a sixth. When each point is labeled $\frac{1}{6}$, $\frac{2}{6}$, and so on, Point H is at $\frac{5}{6}$.

2. C. The number line is divided into thirds, and Point K is two thirds, or $\frac{1}{3} + \frac{1}{3}$, from 0. The distance between 0 and Point K on the number line is $\frac{2}{3}$.

3. B. Point M is at $\frac{4}{6}$ on the number line. Each section of the number line is one sixth the distance from 0 to 1, and M is at the end of the 4th section, so M is at $\frac{1}{6} + \frac{1}{6} + \frac{1}{6} + \frac{1}{6} = \frac{4}{6}$.

4. B. The number line is divided into fourths.

5. D. The number line is divided into eighths. Point N is located at $\frac{5}{8}$.

6. A. The first number line is divided into sixths. Point A is located at $\frac{3}{6}$.

7. C. The number line is divided into fifths, so each section represents a fifth.

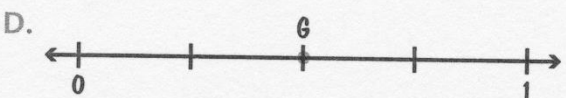
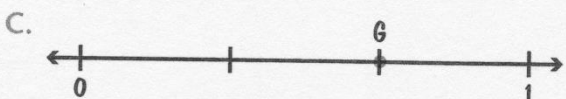
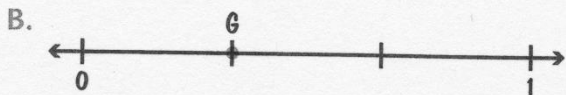
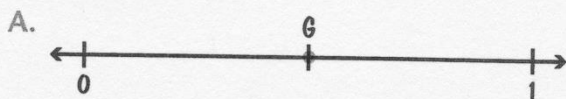
Math-E - Lesson 25 – Fractions of a Line

Practice 25

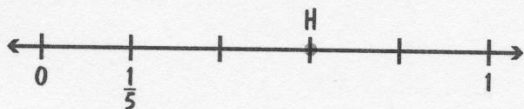
Fractions on a Number Line

3.NF.2.a – Medium, 3.NF.2.b – Medium

- 1 Which number line shows Point G located at $\frac{2}{3}$?

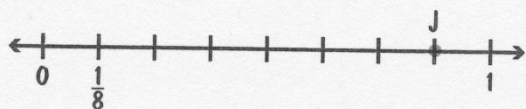


- 2 What is the distance between 0 and Point H on the number line?



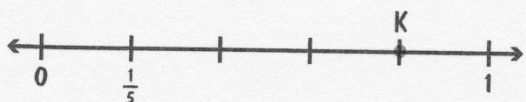
- A. $\frac{2}{5}$ B. $\frac{3}{5}$
C. $\frac{4}{5}$ D. $\frac{5}{5}$

- 3 Where is Point J located on the number line?



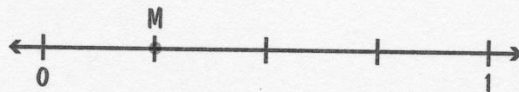
- A. $\frac{5}{8}$ B. $\frac{6}{8}$
C. $\frac{7}{8}$ D. $\frac{8}{8}$

- 4 Where is Point K located on the number line?



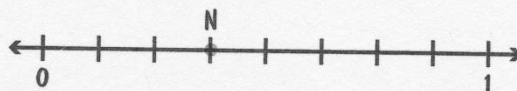
- A. $\frac{4}{5}$ B. $\frac{3}{5}$
C. $\frac{3}{4}$ D. $\frac{1}{4}$

- 5 How many fourths are represented by Point M ?



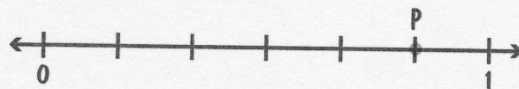
- A. 4 B. 3
C. 2 D. 1

- 6 How many eighths are represented by Point N ?



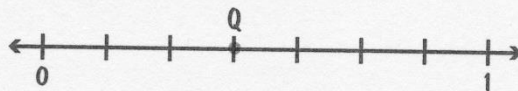
- A. 2 B. 3
C. 4 D. 5

- 7 What is the fractional value of Point P on the number line?



- A. $\frac{4}{5}$ B. $\frac{4}{6}$
C. $\frac{5}{6}$ D. $\frac{5}{8}$

- 8 What is the distance between 0 and Point Q on the number line?



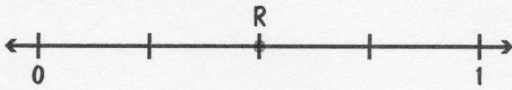
- A. $\frac{3}{7}$ B. $\frac{3}{8}$
C. $\frac{4}{7}$ D. $\frac{4}{8}$

- 9 Kentay measures $\frac{2}{4}$ cup of flour for a recipe. He uses a number line to represent the fraction. What does each section of the number line represent?

- A. a half
B. a third
C. a fourth
D. a fifth

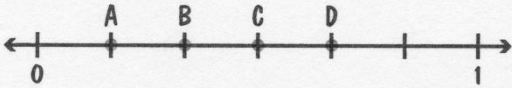
Math-E - Lesson 25 – Fractions of a Line

- 10 Which two statements are true about the number line?

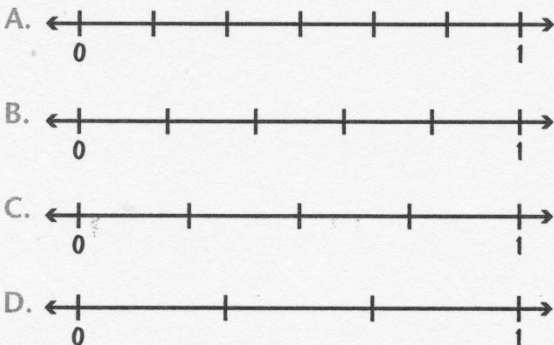


- A. The number line is divided into thirds.
- B. The number line is divided into fourths.
- C. The number line is divided into fifths.
- D. The distance between 0 and Point R is $\frac{2}{3}$.
- E. The distance between 0 and Point R is $\frac{2}{4}$.
- F. The distance between 0 and Point R is $\frac{2}{5}$.

- 11 Priya cuts an apple into six equal pieces. She eats $\frac{2}{6}$ of the apple. Which point on the number line shows the fraction that Priya eats of her apple?



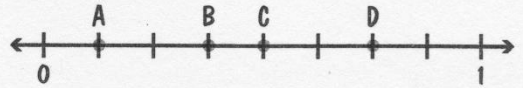
- A. Point A
 - B. Point B
 - C. Point C
 - D. Point D
- 12 Which number line is divided into thirds?



- 13 Grace uses $\frac{1}{2}$ yard of fabric to sew potholders. She wants to draw a number line to represent the fraction. How many equal parts should Grace's number line have?

- A. one equal part
- B. two equal parts
- C. three equal parts
- D. four equal parts

- 14 At a retirement community, $\frac{6}{8}$ of the residents attend the social hour. Which point on the number line represents the fraction $\frac{6}{8}$?

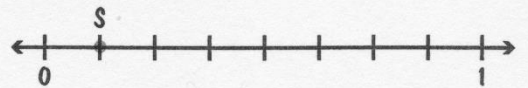


- A. Point A
- B. Point B
- C. Point C
- D. Point D

- 15 Ria has coins in her wallet and $\frac{2}{5}$ of them are pennies. She wants to draw a number line to represent this fraction. How many equal parts should Ria's number line have?

- A. five equal parts
- B. four equal parts
- C. three equal parts
- D. two equal parts

- 16 Which two answers name the fractional value of Point S ?



- A. $\frac{1}{8}$
- B. $\frac{1}{7}$
- C. $\frac{1}{6}$
- D. one eighth
- E. one seventh
- F. one sixth

Math-E - Lesson 25 – Fractions of a Line

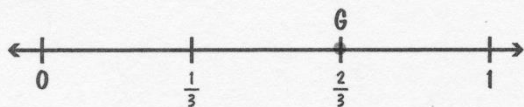
Practice 25

Fractions on a Number Line

pp. 56–57

(3.NF.2.a, 3.NF.2.b)

1. C.



The section from 0 to 1 is divided into three equal sections, so each section represents a third. When each point is labeled with the corresponding fraction, Point G is at $\frac{2}{3}$.

2. B. The number line is divided into fifths. Point H is three fifths, or $\frac{1}{5} + \frac{1}{5} + \frac{1}{5}$, from 0. The distance between 0 and Point H is $\frac{3}{5}$.
3. C. Point J is at $\frac{7}{8}$ on the number line. Each section of the number line is one eighth the distance from 0 to 1, and J is at the end of the 7th section, so J is at $\frac{1}{8} + \frac{1}{8} + \frac{1}{8} + \frac{1}{8} + \frac{1}{8} + \frac{1}{8} + \frac{1}{8} = \frac{7}{8}$.
4. A. Point K is at $\frac{4}{5}$ on the number line. Each section of the number line is one fifth the distance from 0 to 1, and K is at the end of the 4th section, so K is at $\frac{1}{5} + \frac{1}{5} + \frac{1}{5} + \frac{1}{5} = \frac{4}{5}$.
5. D. The number line is divided into fourths. Point M is located at $\frac{1}{4}$.

6. B. The number line is divided into eighths. Point N is located at $\frac{3}{8}$.
7. C. The number line is divided into sixths. Point P is located at $\frac{5}{6}$.
8. A. The number line is divided into sevenths. Point Q is three sevenths, or $\frac{1}{7} + \frac{1}{7} + \frac{1}{7}$, from 0. The distance between 0 and Point Q is $\frac{3}{7}$.
9. C. The number line should be split into four equal parts. Each section represents a fourth.
10. B, E. The number line is divided into fourths. Point R is located at $\frac{2}{4}$.
11. B. The number line is divided into sixths. Point B is located at $\frac{2}{6}$.
12. D. The number line is divided into three equal sections, or thirds.
13. B. Grace's number line representing $\frac{1}{2}$ should have two equal parts.
14. D. The number line is divided into eighths. Point D is located at $\frac{6}{8}$.
15. A. Ria's number line should be divided into fifths, or five equal parts.
16. A, D. The number line is divided into eighths. Point S is located at $\frac{1}{8}$.