

Number Line Navigators

Plot, order, and compare rational numbers.

GRADE 6 • MA.6.NSO.1.1

MA.6.NSO.1.1 "Extend previous understanding of numbers to define rational numbers. Plot, order and compare rational numbers."

NAME _____

DATE _____

READ THE NUMBER LINE

A rational number can be written as a/b , where a and b are integers and b is not 0. Its decimal form terminates or repeats. On a number line, numbers farther right are greater, and numbers farther left are smaller.

WORKED EXAMPLE

Compare $-5/12$ and $-1/3$.

1. Use a denominator of 12.
2. $-1/3 = -4/12$.
3. Among negative numbers, the number farther left is smaller.

Answer: $-5/12 < -1/3$

PRACTICE 6 problems

- 1** Plot $-7/8$ on the section of a number line from -1 to 0 . Is it closer to -1 or 0 ?

ANSWER _____

- 2** Write $<$, $>$, or $=$. $-9/10$ ____ $-4/5$

ANSWER _____

- 3** Order these numbers from least to greatest: $-2/3$, $1/4$, $-5/6$.

ANSWER _____

- 4** Plot $1\frac{1}{4}$ on a number line. Between which two consecutive integers does it belong?

ANSWER _____

- 5** Which number is farther right on a number line: $-7/3$ or $-13/6$?

ANSWER _____

- 6** Point A is at -0.45 . Point B is at $-4/9$. Which point is farther left?

ANSWER _____

APPLY IT Show your work

- 1** At 6 a.m., the temperature was -2.5 degrees C. At 8 a.m., it was $-2\frac{3}{4}$ degrees C. Which temperature was lower? Write the temperatures in order from lower to higher.

WORK SPACE

ANSWER _____

- 2** In an ocean video game, Maya's submarine is at $-\frac{3}{4}$ kilometer and Leo's submarine is at -0.68 kilometer. Whose submarine is higher?

WORK SPACE

ANSWER _____

CHALLENGE One step up

CHALLENGE

Order -0.6 , $-\frac{5}{8}$, $-\frac{3}{5}$, and -0.58 from least to greatest. Use an equals sign for any numbers with the same value, and explain how you know.

PART 1 • PRACTICE

#	PROBLEM	ANSWER
1	Plot $-7/8$ on the section of a number line from -1 to 0. Is it closer to -1 or 0?	It is closer to -1.
2	Write $<$, $>$, or $=$. $-9/10$ ____ $-4/5$	$-9/10 < -4/5$
3	Order these numbers from least to greatest: $-2/3$, $1/4$, $-5/6$.	$-5/6$, $-2/3$, $1/4$
4	Plot $11/4$ on a number line. Between which two consecutive integers does it belong?	Between 2 and 3
5	Which number is farther right on a number line: $-7/3$ or $-13/6$?	$-13/6$
6	Point A is at -0.45. Point B is at $-4/9$. Which point is farther left?	Point A

PART 2 • APPLY IT

- The 8 a.m. temperature was lower. $-2\ 3/4 < -2.5$** Rewrite -2.5 as -2.50. Since -2.75 is farther left than -2.50, $-2\ 3/4$ is lower.
- Leo's submarine is higher.** Rewrite $-3/4$ as -0.75. Since -0.68 is greater than -0.75, Leo's submarine is higher.

CHALLENGE

$-5/8 < -0.6 = -3/5 < -0.58$. Since $-5/8 = -0.625$ and $-3/5 = -0.6$, these values can be compared by their decimal forms.

Accept equivalent fractions, terminating decimals, or repeating decimals when they name the same rational number. For plotting items, accept an accurate location or a correct description of the location on the number line.