

Number Line Detectives

Compare rational numbers and find distances from zero.

GRADE 6 • 6.NS.C.7

CCSS.Math.Content.6.NS.C.7 "Understand ordering and absolute value of rational numbers."

NAME _____

DATE _____

COMPARE AND MEASURE

Numbers farther right on a number line are greater. Among negative numbers, the number with the greater absolute value is less. Absolute value tells a number's distance from 0, so it is never negative.

WORKED EXAMPLE

Order $-11/12$, $2/9$, and $-1/5$ from least to greatest.

1. The negative numbers come before the positive number $2/9$.
2. Since $11/12 > 1/5$, $-11/12 < -1/5$.
3. From least to greatest: $-11/12$, $-1/5$, $2/9$.

Answer: $-11/12$, $-1/5$, $2/9$

PRACTICE 6 problems

1 Write $<$, $>$, or $=$ to compare: $-7/8$ ____ $-3/4$

ANSWER _____

2 Order $2/5$, $-1/2$, 0 , and $-3/10$ from least to greatest.

ANSWER _____

3 Find $|-9/11|$.

ANSWER _____

4 Which number has the greater absolute value: $-4/7$ or $3/5$?

ANSWER _____

5 Is $-1.25 > -1.3$? Write true or false.

ANSWER _____

6 Find $|-2 \frac{1}{4}|$.

ANSWER _____

APPLY IT Show your work

- 1** A game app records each player's score change from the start of a round. Kai has -1.75 points, Mira has 2.5 points, and Luis has -0.6 points. List the score changes from least to greatest.

WORK SPACE

ANSWER _____

- 2** In a game tournament, Jada's score change is $-2\frac{1}{4}$ points and Omar's score change is $1\frac{3}{4}$ points. Whose score change is farther from 0, and by how much?

WORK SPACE

ANSWER _____

CHALLENGE One step up

CHALLENGE

Order $-1\frac{1}{6}$, $\frac{5}{4}$, -1.08, and 0 from least to greatest. Then explain which number has the greatest absolute value.

PART 1 • PRACTICE

#	PROBLEM	ANSWER
1	Write $<$, $>$, or $=$ to compare: $-7/8$ ____ $-3/4$	$-7/8 < -3/4$
2	Order $2/5$, $-1/2$, 0 , and $-3/10$ from least to greatest.	$-1/2, -3/10, 0, 2/5$
3	Find $ -9/11 $.	$9/11$
4	Which number has the greater absolute value: $-4/7$ or $3/5$?	$3/5$
5	Is $-1.25 > -1.3$? Write true or false.	true
6	Find $ -2 \frac{1}{4} $.	$2 \frac{1}{4}$

PART 2 • APPLY IT

1. **-1.75, -0.6, 2.5** Both negative changes come before the positive change. Since -1.75 is farther left than -0.6 , it is the least value.
2. **Jada's score change is farther from 0 by $1/2$ point.** The absolute values are $2 \frac{1}{4}$ and $1 \frac{3}{4}$. Their difference is $1/2$.

CHALLENGE

Least to greatest: $-1 \frac{1}{6}$, -1.08 , 0 , $5/4$. The greatest absolute value is $5/4$ because $5/4$ is 1.25 units from 0, farther than $1 \frac{1}{6}$ units.

Accept equivalent fractions, mixed numbers, or decimals where appropriate. For ordered lists, require every number to be in the correct position.