LESSON MAKER PRO

Rational Number Radar

Compare, order, and measure distance 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 _____

THE BIG IDEA

On a number line, numbers farther to the right are greater. A negative number is less than zero, and among negative numbers, the number with the greater absolute value is smaller. Absolute value is a number's distance from zero, so it is never negative.

WORKED EXAMPLE

Compare -1.6 and 3/10. Write <, >, or =.

1. Rewrite 3/10 as 0.3.
2. -1.6 is negative, and 0.3 is positive.
3. Any negative number is less than any positive number.

Answer: -1.6 < 3/10

PRACTICE 6 problems

1 Compare -2/3 and -3/5. Write <, >, or =.

ANSWER _____

2 Find |-7/8|.

ANSWER _____

3 List -1.2, 0.4, and -5/4 from least to greatest.

ANSWER _____

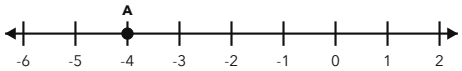
4 Compare 2.75 and 11/4. Write <, >, or =.

ANSWER _____

5 Write the opposite of 4/9 and the absolute value of 4/9.

ANSWER _____

6 What rational number is represented by point A?



ANSWER _____

APPLY IT Show your work

1 In a game, Kai's score changed by -3/4 point, and Nia's score changed by -1/2 point. Whose score change is lower? How far from zero is each score change?

WORK SPACE

ANSWER _____

2 The table shows how each student's time changed after practicing a robotics course. A negative change means the course took less time. Order the changes from least to greatest. Whose change has the greatest absolute value?

ROBOTICS COURSE TIME CHANGES

Student	Change in Time, minutes
Lian	-1 1/4
Omar	-1/2
Priya	1/8
Zoe	3/4

WORK SPACE

ANSWER _____

CHALLENGE One step up

Maya says that -5/6 is farther from zero than 7/8 because 6 is less than 8. Is Maya correct? Explain using absolute values.

WORK SPACE AND ANSWER

ANSWER KEY

Rational Number Radar

GRADE 6 · 6.NS.C.7

PART 1 · PRACTICE

#	PROBLEM	ANSWER
1	Compare -2/3 and -3/5. Write <, >, or =.	**-2/3 < -3/5**
2	Find |-7/8|.	**7/8**
3	List -1.2, 0.4, and -5/4 from least to greatest.	**-5/4, -1.2, 0.4**
4	Compare 2.75 and 11/4. Write <, >, or =.	**2.75 = 11/4**
5	Write the opposite of 4/9 and the absolute value of 4/9.	**Opposite: -4/9; absolute value: 4/9**
6	What rational number is represented by point A?	**-4**

PART 2 · APPLY IT

1. **Kai's score change is lower. Kai's change is 3/4 point from zero, and Nia's change is 1/2 point from zero.** Compare the two negative numbers: -3/4 is less than -1/2. Use absolute value to find each distance from zero.
2. **Least to greatest: Lian (-1 1/4), Omar (-1/2), Priya (1/8), Zoe (3/4). Lian's change has the greatest absolute value.** Place the negative changes before the positive changes, then compare their values. The absolute value of -1 1/4 is 1 1/4, which is greater than the other distances from zero.

CHALLENGE

No. |-5/6| = 5/6 and |7/8| = 7/8. Since 7/8 is greater than 5/6, 7/8 is farther from zero.

Accept equivalent fraction and decimal forms when they represent the same value. For ordered lists, require all values in the correct order.