

Distance or Direction

Sort comparisons by what they tell you.

NY-6.NS.7.d "Distinguish comparisons of absolute value from statements about order."

NAME _____

DATE _____

DISTANCE COMPARISON

Absolute value tells a number's distance from zero. A distance comparison compares absolute values.

$$|-9| < |12|$$

ORDER STATEMENT

An order statement tells which number is greater or less on the number line. It compares the numbers themselves.

$$2.5 > -1$$

1 SORT _____ 8 items

For Part 1, circle the category for each statement; for Part 2, choose two items, one from each category, and explain whether each compares distances from zero or positions on the number line.

1. $|-7| > |2|$

DISTANCE

ORDER

2. $-3/4 < 1/5$

DISTANCE

ORDER

3. $6 > -1$

DISTANCE

ORDER

4. $|1.2| < |-4|$

DISTANCE

ORDER

5. $-2\frac{1}{3} > -2\frac{1}{2}$

DISTANCE

ORDER

6. $|-3/5| = |0.6|$

DISTANCE

ORDER

7. $|8| < |-10|$

DISTANCE

ORDER

8. $0 > -7/8$

DISTANCE

ORDER

2

PROVE IT

Explain your thinking

Pick two items from Part 1. For each one, tell how you knew where it belonged.

ITEM # _____ HOW I KNEW _____

ITEM # _____ HOW I KNEW _____

3

MAKE YOUR OWN

One of each

Write one true DISTANCE statement and one true ORDER statement using rational numbers.

DISTANCE _____

ORDER _____

CHALLENGE

Using $-4\frac{1}{2}$ and 3, write one true DISTANCE statement and one true ORDER statement.

PART 1 • SORT

#	ITEM	CATEGORY	WHY
1	$ -7 > 2 $	DISTANCE	It compares the absolute values, or distances from zero.
2	$-3/4 < 1/5$	ORDER	It compares the locations of two numbers on the number line.
3	$6 > -1$	ORDER	It states which number is greater.
4	$ 1.2 < -4 $	DISTANCE	It compares absolute values.
5	$-2 \frac{1}{3} > -2 \frac{1}{2}$	ORDER	It compares the numbers themselves, not their absolute values.
6	$ -3/5 = 0.6 $	DISTANCE	It compares distances from zero, which are both 0.6.
7	$ 8 < -10 $	DISTANCE	It compares absolute values, 8 and 10.
8	$0 > -7/8$	ORDER	It states the order of two numbers on the number line.

PART 2 • PROVE IT

Accept any explanation that names the deciding feature from the rule box for the chosen item.

PART 3 • MAKE YOUR OWN (SAMPLE ANSWERS)

- **DISTANCE:** $|-6| > |4|$
- **ORDER:** $-1/2 < 3/8$

Challenge: DISTANCE: $|-4 \frac{1}{2}| > |3|$. ORDER: $-4 \frac{1}{2} < 3$.

DISTANCE items are 1, 4, 6, and 7. ORDER items are 2, 3, 5, and 8; accept equivalent true student-created statements that match each category.