Distance or Order?

Sort statements by what they compare.

CCSS.Math.Content.6.NS.C.7d "Distinguish comparisons of absolute value from statements about order. For example, recognize that an account balance less than -30 dollars represents a debt greater than 30 dollars."

NAME _____ DATE _____

ABSOLUTE VALUE COMPARISON

This compares how far numbers are from 0. The sign does not change the distance from 0.

A submarine at −25 meters is farther from sea level than one at 10 meters.

ORDER STATEMENT

This compares which number is greater or less. It tells where numbers are located compared with each other.

−2 comes before 5 on a number line.

1 SORT

8 items

For each statement, circle ABSOLUTE or ORDER, then choose two statements and explain how you knew which category each one belongs in.

1. $|-14| > |9|$ — ABSOLUTE / ORDER
2. A debt of $52 is greater in size than a debt of $18. — ABSOLUTE / ORDER
3. $-11 < -5$ — ABSOLUTE / ORDER
4. $|3| < |-16|$ — ABSOLUTE / ORDER
5. $4 > -13$ — ABSOLUTE / ORDER
6. −27 is to the left of −20. — ABSOLUTE / ORDER
7. A temperature change of −8° has the same size as a change of 8°. — ABSOLUTE / ORDER
8. $-6 > -15$ — ABSOLUTE / 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 new ABSOLUTE example and one new ORDER example.

ABSOLUTE _____

ORDER _____

CHALLENGE

Write two true statements about −24 and 9: one ORDER statement and one ABSOLUTE statement.

ANSWER KEY

Distance or Order?

GRADE 6 · 6.NS.C.7d

PART 1 · SORT

#	ITEM	CATEGORY	WHY
1	$\lvert -14\rvert > \lvert 9\rvert$	**ABSOLUTE**	It compares distances from 0, 14 and 9.
2	A debt of \$52 is greater in size than a debt of \$18.	**ABSOLUTE**	It compares debt magnitudes, 52 and 18, not which signed balance is greater.
3	$-11 < -5$	**ORDER**	It compares the positions of −11 and −5.
4	$\lvert 3\rvert < \lvert -16\rvert$	**ABSOLUTE**	It compares distances from 0, 3 and 16.
5	$4 > -13$	**ORDER**	It states that 4 is greater than −13.
6	−27 is to the left of −20.	**ORDER**	Left on a number line describes order.
7	A temperature change of −8° has the same size as a change of 8°.	**ABSOLUTE**	The two changes have equal magnitude, or equal absolute value.
8	$-6 > -15$	**ORDER**	It states that −6 is greater than −15.

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)

- **ABSOLUTE**: $\lvert -21\rvert < \lvert 30\rvert$
- **ORDER**: $-17 < 1$

Challenge: $-24 < 9$, and $\lvert -24\rvert > \lvert 9\rvert$.

For Part 2, accept explanations that identify distance from 0 for ABSOLUTE statements or greater, less, left, or right position for ORDER statements. In the challenge, both statements must be true and must compare the same two numbers.