Greater Goes Where?

Compare a number's position with its distance from zero.

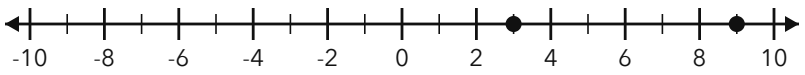
MT.6.NS.7 "Understand ordering and absolute value of rational numbers by: Interpreting statements of inequality as statements about the relative position of two numbers on a number line diagram, Writing, interpreting..."

NAME _____ DATE _____

GREATER IS FARTHER

The point farther right is the greater number. In this category, that point is also farther from 0.

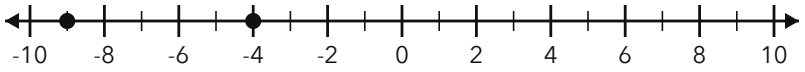
For 3 and 9, the greater number, 9, is farther from 0.



GREATER IS CLOSER

The point farther right is the greater number. In this category, that point is closer to 0.

For -9 and -4, the greater number, -4, is closer to 0.



1 SORT

8 items

For each figure, circle FARTHER or CLOSER, then choose one figure from each category and explain your choices using position and distance from 0.

1.

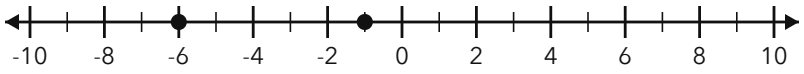


Figure 1 **FARTHER** **CLOSER**

2.

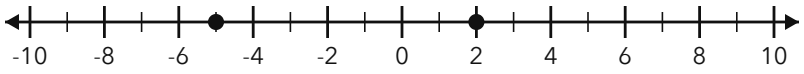


Figure 2 **FARTHER** **CLOSER**

3.

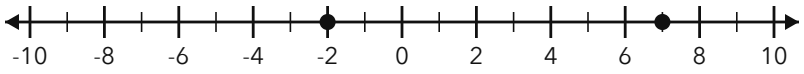


Figure 3 **FARTHER** **CLOSER**

4.

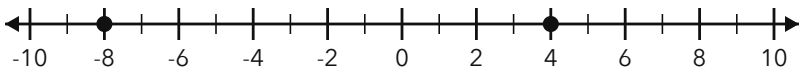


Figure 4 **FARTHER** **CLOSER**

5.

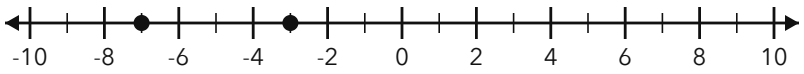


Figure 5

FARTHER **CLOSER**

6.

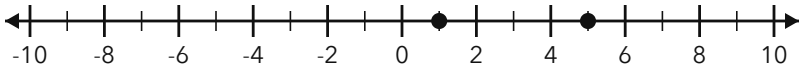


Figure 6

FARTHER **CLOSER**

7.

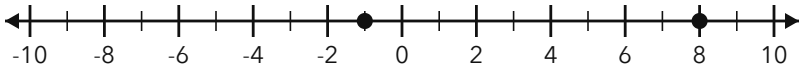


Figure 7

FARTHER **CLOSER**

8.

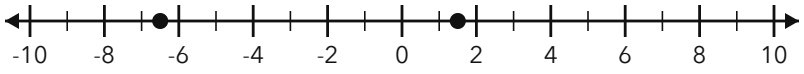


Figure 8

FARTHER **CLOSER**

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 pair of rational numbers for FARTHER and one for CLOSER, and explain each choice.

FARTHER _____

CLOSER _____

CHALLENGE

Choose a negative number and a positive number that make CLOSER, then change only the positive number to make FARTHER; show both pairs and explain.

ANSWER KEY

Greater Goes Where?

PART 1 · SORT

#	ITEM	CATEGORY	WHY
1	Figure 1 (numberline)	**CLOSER**	-1 is greater than -6, but its distance from 0 is 1 rather than 6.
2	Figure 2 (numberline)	**CLOSER**	2 is greater than -5, but its distance from 0 is 2 rather than 5.
3	Figure 3 (numberline)	**FARTHER**	7 is greater than -2, and its distance from 0 is 7 rather than 2.
4	Figure 4 (numberline)	**CLOSER**	4 is greater than -8, but its distance from 0 is 4 rather than 8.
5	Figure 5 (numberline)	**CLOSER**	-3 is greater than -7, but its distance from 0 is 3 rather than 7.
6	Figure 6 (numberline)	**FARTHER**	5 is greater than 1, and its distance from 0 is 5 rather than 1.
7	Figure 7 (numberline)	**FARTHER**	8 is greater than -1, and its distance from 0 is 8 rather than 1.
8	Figure 8 (numberline)	**CLOSER**	1.5 is greater than -6.5, but its distance from 0 is 1.5 rather than 6.5.

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)

- **FARTHER**: -1.5 and 4. The greater number, 4, is farther from 0.
- **CLOSER**: -8 and -2.5. The greater number, -2.5, is closer to 0.

Challenge: With -10 and 2, the greater number, 2, is closer to 0. Change 2 to 11: 11 is greater than -10 and farther from 0.

For Part 2, accept explanations that identify the greater point as farther right and compare both distances from 0. For Part 3, pairs must have different distances from 0 so they fit exactly one category.