LESSON MAKER PRO

# Number Line Showdown

*Compare numbers and their distances from zero.*

**GRADE 6 · 6.NS.C.13**

**6.NS.C.13** "Compare and order rational numbers and absolute value of rational numbers with and without a number line in order to solve real-world and mathematical problems."

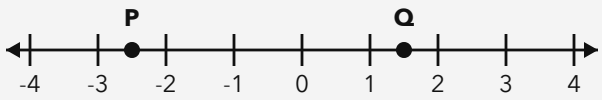
NAME _____ DATE _____

## POSITION AND DISTANCE

On a number line, a number to the right is greater than a number to the left. A number's absolute value is its distance from zero, so it is never negative.

### WORKED EXAMPLE

Use the number line to compare P and Q. Then compare |P| and |Q|.

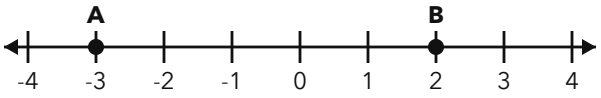



1. P is at -2.5, and Q is at 1.5.
2. P is left of Q, so P < Q.
3. Their distances from zero are 2.5 and 1.5, so |P| > |Q|.

**Answer: P < Q; |P| > |Q|.**

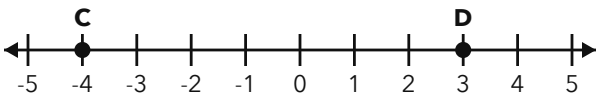
## PRACTICE 6 problems

**1** Use the number line to compare A and B with < or >.




**ANSWER** _____

**2** Use the number line to compare |C| and |D| with < or >.




**ANSWER** _____

**3** Compare -7/4 and -1.6 using <, >, or =.

**ANSWER** _____

**4** Order -0.8, 0.25, and -1/2 from least to greatest.

**ANSWER** _____

**5** Which number is farther from zero, -9/10 or 0.85?

**ANSWER** _____

**6** Order |-1.2|, |3/4|, and |-0.5| from least to greatest.

**ANSWER** _____

## APPLY IT Show your work

**1** In a video game, Nia's score changes by -1.4 points and Leo's changes by 1.25 points. Whose score changes more in size, and by how many points?

WORK SPACE

**ANSWER** _____

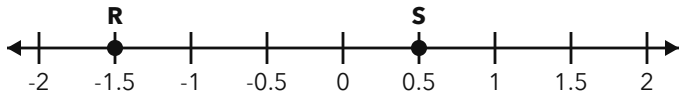
**2** A school weather station records -3/4°C on Monday, -0.6°C on Tuesday, and 0.1°C on Wednesday. Order the days from coldest to warmest.

WORK SPACE

**ANSWER** _____

## CHALLENGE One step up

List R, S, |R|, and |S| from least to greatest, using = for ties. Explain the tie in one sentence.




WORK SPACE AND ANSWER

**ANSWER KEY**

# Number Line Showdown

**GRADE 6 · 6.NS.C.13**

## PART 1 · PRACTICE

| # | PROBLEM | ANSWER |
|---|---|---|
| 1 | Use the number line to compare A and B with < or >. | **A < B** |
| 2 | Use the number line to compare \|C\| and \|D\| with < or >. | **\|C\| > \|D\|** |
| 3 | Compare -7/4 and -1.6 using <, >, or =. | **-7/4 < -1.6** |
| 4 | Order -0.8, 0.25, and -1/2 from least to greatest. | **-0.8 < -1/2 < 0.25** |
| 5 | Which number is farther from zero, -9/10 or 0.85? | **-9/10** |
| 6 | Order \|-1.2\|, \|3/4\|, and \|-0.5\| from least to greatest. | **\|-0.5\| < \|3/4\| < \|-1.2\|** |

## PART 2 · APPLY IT

1. **Nia's score changes more in size by 0.15 points.** Compare the absolute values: 1.4 > 1.25. The difference is 1.4 - 1.25 = 0.15.
2. **Monday, Tuesday, Wednesday** Convert -3/4 to -0.75. The temperatures in order are -0.75°C < -0.6°C < 0.1°C.

## CHALLENGE

**R < S = |S| < |R|. S is positive, so its absolute value equals S.**

Accept equivalent decimal or fraction forms in ordered lists. In the challenge, the explanation must identify why S and |S| are equal.